00080343

Digitized with financial assistance from the
Dr. Rani Karur
on 12 April, 2019

TOWN PLANNING

EXPERIMENTS IN INDUSTRIAL ORGANISATION

BY

EDWARD CADBURY

WITH A PREFACE BY

W. J. ASHLEY, M.A.

Professor of Commerce in the University of Birmingham.

WITH FOLDING PLATES

Crown 8vo. 5s. net.

LONGMANS, GREEN AND CO.

LONDON, NEW YORK, BOMBAY, CALCUTTA, AND MADRAS

DEVELOPMENT
OF
GREATER
BIRMINGHAM
1. 1731
2. 1810
3. 1855
4. 1912
5. UNDEVELOPED

TOWN PLANNING

WITH SPECIAL REFERENCE TO THE BIRMINGHAM SCHEMES

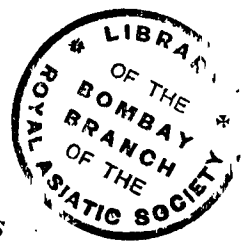
B1705

BY

GEORGE CADBURY, JUNR.

MEMBER OF BIRMINGHAM CITY COUNCIL TOWN PLANNING COMMITTEE

80343
a1



WITH ILLUSTRATIONS AND MAPS

R-d-50

LONGMANS, GREEN AND CO.
39 PATERNOSTER ROW, LONDON
FOURTH AVENUE & 30TH STREET, NEW YORK
BOMBAY, CALCUTTA, AND MADRAS
1915

711.4 09 761781
Card/Tow
80343

TO

MY FATHER

PREFACE

A REMARKABLE feature of the general movement towards Social Betterment is the increasing attention which is being given to the question of Town Planning.

The day has gone past when the subject could be dismissed by being contemptuously described as an "expensive fad," and men are beginning to realise that Town Planning may be advantageous to all classes of the community.

The provision of properly-planned factory areas, with facilities for transit by canal, railway, and road, will greatly benefit the manufacturer and add materially to the industrial resources of the city.

The provision of houses with gardens, with plenty of air and light, will greatly benefit the artisan, and also add to the industrial efficiency of the city by making healthy and efficient workers.

The provision of playing spaces and parks will greatly benefit the children, for they will be able to enjoy their games away from the danger of the streets in pleasant and healthy surroundings.

The benefits which Town Planning can confer upon the city fall within well-defined limits. Town Planning can do little to improve existing conditions in cities, but it

can do a great deal towards preventing a repetition of these evils in the undeveloped portions of the city.

By the provision of properly-planned areas in the outlying portions of the city, with the provision of suitable roads for transit, the movement for spreading the people out from the centre of the city will be accelerated, and in that way the overcrowding will be lessened. But so long as men are in receipt of wages which do not permit them to pay a reasonable rent for a house, Town Planning can do but little for them.

The question, then, of Town Planning is one of general interest, and as the movement in its wider aspects is a comparatively new one, but little information of a practical nature is available.

This book, therefore, does not pretend to discuss the question of Town Planning in any detail. It merely touches on some of the chief points to be considered, and makes some suggestions, reinforced by some personal experience, as to how the problems are to be dealt with. For it cannot be too strongly emphasised that, as yet, Town Planning has not advanced far beyond the stage of practical experiment. The experience of Continental cities is very valuable, but it does not assist us towards the solution of many of our difficulties, as the conditions are so widely different. Methods of local government and conditions of land tenure, to instance two matters only, are so different in England that no complete comparison can be made with regard to Town Planning, and perhaps the chief contribution of value is the experience in the benefits to be obtained from the communal ownership of land. English Town Planning has yet to face certain difficult questions on which as yet no

experience is available. Among these are the questions of Compensation and Betterment, and the absence of any clear decision as to the methods of assessment certainly impedes the progress of the Town Planning movement.

It is not proposed to touch on the architectural and legal sides of Town Planning, as there are already many books which deal adequately with these matters. This book aims rather at a general treatment of the subject, avoiding technical details and emphasising those aspects of the question which are of general public importance.

It is hoped that members of Local Authorities will find material here which will be of use to them in the preparation of schemes, but it is hoped, also, that the book may be of value and interest to the general public, and particularly those members of it who are working for social betterment.

This book makes no claim to novelty or originality, but it is put forward as a small contribution on what is admittedly a question of increasing importance, and consists of information, summarised in a convenient form, which would otherwise be difficult of access to the general public.

I am indebted to many friends for generous assistance rendered in the compilation of this work, and in many cases I have acknowledged their help in the letterpress of the book, but in particular I would like to express my thanks to Mr. S. A. Wilmot for the diagrams, maps, and plans.

I am much indebted to others for supplying me with matter, especially Mr. Raymond Unwin of Hampstead, Mr. W. H. Gaunt of Letchworth, Mr. J. H. Barlow and Mr. L. P. Appleton of the "Bournville Village Trust,"

Mr. Bruce Waite of Harborne Tenants Limited, and Mr. Henry E. Stilgoe, the Birmingham City Surveyor. Mr. Unwin and Mr. Stilgoe have kindly allowed me to reproduce illustrations previously published by them.

I cannot conclude without acknowledging the invaluable help of Mr. Norman Birkett, who has been constant in criticism and suggestion throughout the preparation of this book, and who has kindly revised the whole of the proofs.

GEORGE CADBURY, JUNR.

PRIMROSE HILL,
SELLY OAK,
BIRMINGHAM.

CONTENTS

CHAP.		PAGE
I.	THE NEED FOR TOWN PLANNING	1
II.	TOWN PLANNING IN BIRMINGHAM AND DISTRICT	23
III.	THE PREPARATION OF A SCHEME BY THE LOCAL AUTHORITY	38
IV.	ROADS	61
V.	ALLOCATION OF SITES	72
VI.	THE RESIDENTIAL AREAS AND THE LIMITATION OF THE NUMBER OF HOUSES TO THE ACRE . .	91
VII.	GARDENS AND ALLOTMENTS	113
VIII.	PUBLIC HEALTH AND SOCIAL CONSIDERATIONS .	122
IX.	CONCLUSIONS	139

APPENDIX I

THE EAST BIRMINGHAM SCHEME 153

APPENDIX II

THE HOUSING AND TOWN PLANNING ACT, ETC. (PART II), CLAUSES 54 TO 67, 73 AND 74. SCHEDULES IV AND V 183

LIST OF ILLUSTRATIONS

HALF-TONE ILLUSTRATIONS

	FACING PAGE
HOUSES AT SAME RENT, STIRCHLEY AND BOURNVILLE	12
BRISTOL ROAD, BIRMINGHAM, TO BE WIDENED TO 100′ WITH A SEPARATE TRAMWAY TRACK	66
BOURNVILLE LANE RAISED FOOTPATH, SHOWING PRESERVATION OF TREES	68
OXHILL ROAD, HANDSWORTH, SHOWING PRESERVATION OF TREES	70
HARBORNE TENANTS, SHOWING NARROW ROADS AND GRASS MARGINS	74
BOURNVILLE TENANTS, SHOWING RECREATION GROUND AT REAR OF HOUSES	74
FACTORY AREA, BOURNVILLE, SHOWING PARK BELT	75

FOLDING PLATES

PLAN OF BIRMINGHAM, 1731	24
CITY OF BIRMINGHAM, QUINTON, HARBORNE, AND EDGBASTON SCHEME	30
GENERAL SURVEY	38
EAST BIRMINGHAM SCHEME. CROSS-SECTIONS SHEET A	182
EAST BIRMINGHAM SCHEME. CROSS-SECTIONS SHEET B	

ILLUSTRATIONS IN THE TEXT

	PAGE
DEVELOPMENT OF GREATER BIRMINGHAM	iv
ACTUAL DEVELOPMENT OF AN ESTATE	10
THE SAME ESTATE ON GARDEN CITY LINES	11
PLAN OF BIRMINGHAM, 1750	15

PAGE

TOWN PLANNING SCHEMES IN AND AROUND BIRMINGHAM . 29

SECTION OF 100′ ROAD AS PROVIDED FOR IN THE HARBORNE AND QUINTON SCHEME 63

EAST BIRMINGHAM TOWN PLANNING SCHEME 73

FRANKFORT HARBOUR AND FACTORY AREA 77

LETCHWORTH FACTORY AREA 79

BOURNVILLE VILLAGE. PLAN 81

BOURNVILLE TENANTS LTD. PLAN 85

HARBORNE TENANTS ESTATE, BIRMINGHAM. PLAN . . 93

SIZE OF PLOTS AND COMPARATIVE GROUND RENTS . . 109

DEATH-RATES IN WARDS 132

DENSITY OF POPULATION IN WARDS 133

POPULATION PER ACRE AND INFANTILE MORTALITY . . 135

TOWN PLANNING

CHAPTER I

THE NEED FOR TOWN PLANNING

"From the roof of our dwellings as from some solitary watch tower, we can discern the progress of our armies. Southward lies the Land of Promise—hills covered with greenery—the one cool and quieting sight in the hot wilderness of bricks and mortar. . . . . Our armies are innumerable—the force behind us is importunate—our opponents are feeble and divided. . . . But two generations back Walworth consisted of public gardens; Camberwell was a pretty and a peaceful suburb; Wandsworth an old-world village by a quiet stream. In less than fifty years we have converted these into acres of desolation—stagnant aggregations of neglected humanity. In a few years the active and populous region now resisting our advance will have disappeared beneath the onward flood . . . as the Sussex coast beneath the restless unquiet sea."

C. F. G. MASTERMAN, M.P.,
From the Abyss, page 47.

"I suppose no city in all the world (unless it be Washington) has ever produced so complete and ample a forecast of its own future as this Commission's plan of Boston. An area with a radius of between fifteen and twenty miles from the State House has been planned out and prepared for growth. Great reservations of woodland and hill have been made; the banks of nearly all the streams and rivers and meres have been secured for public park and garden, for boating and other water sports; big avenues of vigorous young trees, a hundred and fifty yards or so wide, with drive ways and riding ways and a central grassy band for electric tramways, have been prepared, and indeed the fair and ample and shady new Boston, the Boston of 1950, grows visibly before one's eyes. I found myself comparing the disciplined confidence of these proposals to the blind enlargement of London. . . ."

H. G. WELLS,
The Future in America, page 68.

IT is manifest on all sides that the question of Town Planning is exercising the minds and stimulating the imagination of increasing numbers of men from day to day. The movement is now no longer confined to a select handful of experts, but as the advantages of

Town Planning are expounded, there is an uneasy feeling among multitudes of people that our present lack of method in the control of cities is productive of waste, muddle, and disease.

The two quotations which stand at the head of this chapter mark the sharp contrast which in some dim sense is beginning to be widely appreciated, and the success of Town Planning is assured when clear thinking is introduced into the matter.

For many years Social Reformers have realised that isolated and spasmodic developments of the various resources of city life have been leading to very unsatisfactory results. The development of tramway systems, suburban railway services, and other forms of local transit have not met the housing and overcrowding problems in the way that was expected. They have resulted in the mere duplication of existing conditions without affording relief in most cases to the city dweller. The increment in value has gone into the pockets of the landowners, and at the same time the countryside has been spoilt for miles round our great cities. It has long been recognised that some measure of control of the land opened up must be coincident with the development of transit facilities. It is essential that all interests should be properly safeguarded, not the least important of which are those of the community.

The evils of existing cities have long been the despair of all social workers, and the support which Town Planning is receiving on all sides is due in some measure to the fact that it affords a measure of prevention against the repetition of these evils in the still undeveloped portions of the city.

Perhaps a short survey of present town conditions with their attendant evils, and some suggestions as to how

Town Planning can, in some degree, guard against their repetition, would not be out of place.

The housing conditions in most of our large cities and towns, and indeed in rural areas too, are a scandal to our civilisation :—

"Making full allowance for the operation of improvidence and vice, it is true that thousands of working-class families are compelled to live in houses which are a scandal to our civilisation and a disgrace to our Christianity."*

It would be easy to quote figures with regard to this matter from almost any city in England. Take, for example, the Report of the Chairman of the Liverpool Housing Committee :—

"Years ago there existed in Liverpool, and there still exists, certain portions of the city in which you will find houses so crowded together that twelve of them (six on each side of a central area 15 ft. wide) would go into a space of 360 sq. yds., that is at the rate of 161 houses to the acre. These twelve houses afford accommodation to from 70 to 80 people, and they are supplied with one standpipe for water, common to all ; and two dry closets at one end of the courtyard, also common to all, and otherwise they are without conveniences, water supply, wash boilers, baths, yards, and so forth."†

Or take an illustration from Birmingham, where there are 30,000 back-to-back houses at the present time :—

"The court looks black and blank and dreary. There is water standing about on the ground, and the very walls of the houses themselves are soaked through with moisture. There are 17 houses in one court facing one another, on each side there are houses facing one another 9 ft.

* The Bishop of Wakefield at the Church Congress, 1912.
† Paper read at Conference of Local Authorities, Bradford, 1913.

apart, so that all air and sunlight is obstructed from entering one house on each side of the narrow passage-way. There is no decent sanitary arrangement, the walls are decaying, and the interior of the houses dark and old." *

Such facts as these are common to all great cities, and the terrible consequences are recorded in some degree in the high sickness and mortality rates, the criminal statistics, and the financial statements.

The sickness and mortality rates show very great variation, ranging from 9·7 per thousand in the more rural parts to 25·4 per thousand in the older and more densely-populated wards. An examination of the chart on page 129 will show how significant this fact is, the death-rate closely following the density, even in the Market Hall ward, where the business centre has displaced the residential population, with the result that the death-rate is about half that of the neighbouring wards. A similar relation between the infantile mortality rate and density of population will be observed from an examination of the chart on page 135.

No impartial examination of the state of crime in any large city, the convictions for drunkenness, assault, and kindred offences, and above all the convictions of young offenders, can fail to impress the reader with a sense of the close connection between these things with the Housing question. What is to be expected from child-life which is reared in courts and alleys where no touch of Nature enters to stimulate and brighten the life? Is it little wonder that the children tend to be degraded by their surroundings and drift into a life which tends to bring them into the meshes of the law?

* "Birmingham Daily Mail," April 30th, 1913.

"Consider merely the children at one period of their lives. They exhibit an astonishing eagerness to know and to understand the conditions of the marvellous world in which they are living. They read with avidity fairy tales and histories of adventure. They construct stories of a region of fantasy of their own designing. They press to any form of entertainment, stimulus, or novel change in their surroundings. They manifest a love of colour and form, and often a real selective taste; a delight in music and rhythmic action, a refinement of mind, an originality, and often a physical beauty which is a perpetual astonishment to those who apprehend the surroundings from which these have sprung. Human nature, however stunted or dwarfed by cramped dwellings, poor food, or hereditary disease, seems perennially about to blossom into something holy and divine. Ten or fifteen years later contemplate the same population. In the ten years' interval the dream has vanished for ever, the awakening has come—not, indeed, to full consciousness, but to a sort of nightmare, somnambulent progress through the unchanging monotonous days. No book will be opened again. The taste for form and colour has vanished; singing and dancing and the love of melody have dropped out of existence. The physical beauty has crumpled up and departed; long hours of desolating toil, charring, washing, the premature care of a family, early work in the factories has made the human body of man or woman stunted, deformed, haggard, a thing not good to look upon."*

And what of the adult? Given resolution and determination, it may very well be that many overcome the effect of their surroundings, but there are countless thousands who fail. By slow and painful stages they drift into habits and modes of life which cause them eventually to be numbered with the criminal classes of the population.

* From "The Heart of the Empire," C. F. G. Masterman.

The relation between crime and overcrowding has never yet been worked out on any accurate and comprehensive scale, and indeed the difficulty of doing so is apparent at once; but social workers are unanimous in this—that the effect of surroundings upon character cannot be overestimated. The Head Constable of the city of Liverpool has supplied the following figures with regard to crime in relation to people living in certain of the areas dealt with by the Housing Committee, both before and after demolition :—

Adlington Street Area

	1894	1904	1910	1911	1912
Drunkenness	81	34	12	—	2
Assaults	40	4	1	—	—
Other offences	81	46	21	2	2

Hornby Street Area

	1901	1910	1911	1912
Drunkenness	32	32	33	29
Assaults	19	3	4	6
Other offences	119	49	11	17

Burlington Street Area

	1905	1911	1912
Drunkenness	17	2	6
Assaults	2	2	1
Other offences	27	3	7

The Head Constable, commenting on these tables, says :—

"The figures are of real value because the Housing Department takes pains to secure as tenants those who have been dispossessed through its operations. The figures therefore indicate real personal regeneration."

It is only necessary to add that in the Burlington Street Area above-mentioned 99½ per cent of those dispossessed were re-housed in the new scheme.

The earliest year named in each case represents the figure taken of crime before the demolition of the insanitary property on the area in question.

Town Planning aims at the provision of better surroundings than have hitherto existed, and there can be very little doubt that the results will justify the work. It is necessary to emphasise the fact that Town Planning is not a panacea for every ill with which mankind is afflicted. Its beneficent work is necessarily limited, but it is contended that it does at least provide a foundation upon which enduring reform can be built. There is perhaps some truth in the observation that the cause of Town Planning, like so many other valuable causes, has suffered from the extreme claims which have been put forward from time to time by its ardent supporters. It is well to recognise the necessarily restricted sphere of its operation. In this connection there are some wise words used by the late Sir Alfred Lyttelton, M.P. :—

"But good constructive workers in fields strewn with the debris of past mistakes must be cautious; must not enlist on the side of ancient abuses the sentiment of Justice which revolts against the sacrifice of the individual for those general errors for which the community is responsible, and must bear steadily in mind that impatience of financial burden, especially in the form of rates, which, as we must all recognise, is a primary and powerful political motive among our people."*

But even if the arguments based on mortality rates and criminal statistics are not sufficiently convincing, the expenditure of the rate-payers' money on removing slum areas, rehousing the people, and opening up new streets must bring home to the reader the preventable nature of

* Preface to "Practical Housing," by J. S. Nettlefold.

much of this expenditure, and how vast is the waste continually going on in our midst. Almost any city would serve as an illustration of heavy, preventable expenditure. The city of Sheffield has spent £100,000 in removing slums in the old Crofts area which covered nearly five acres, that is, a cost of £2000 per acre. The old narrow streets which were about one hundred years old were abolished, and new streets forty to fifty feet wide, with much better gradients, were constructed.*

Liverpool, up to 1912, has spent £1,135,000, the net charge to the rate-payers on the whole outlay since 1864 being £37,000 per year, but the cost of the special policy of rehousing the dispossessed is £22,700 per annum, a matter of 1½d. in the pound on rates. But Liverpool spends £800,000 a year on hospitals, £129,000 a year on cleansing, so that £22,000 on Housing is not the sheer loss it appears at first sight to be.†

The Metropolitan Board of Works spent £1,500,000 in pulling down old houses; the London County Council spent £1,114,800 in clearing insanitary areas, and in the Tabard Street area alone spent £366,000 for 16½ acres of land containing 625 insanitary dwellings—that is, £22,000 an acre; Manchester spent £152,623 in displacing 2635 persons; and every city has the same tale to tell.

Much of this expenditure quite obviously might have been saved if foresight had been exercised, but it is not yet sufficiently recognised how great are the losses and disadvantages which the city suffers from these things. In the Bevington Street area of the Liverpool Corporation, where slum property was removed and the slum dwellers rehoused on the same area in improved dwellings, it was found that the general death-rate fell by more than

* C. F. Wike, City Surveyor, Sheffield.
† Colonel G. Kyffin-Taylor, Chairman Liverpool Housing Committee.

half; the average annual death-rate from consumption was reduced to 1·9 per thousand; the infantile mortality rates declined; and a great improvement in the habits and cleanliness of the people took place. The report continues:—

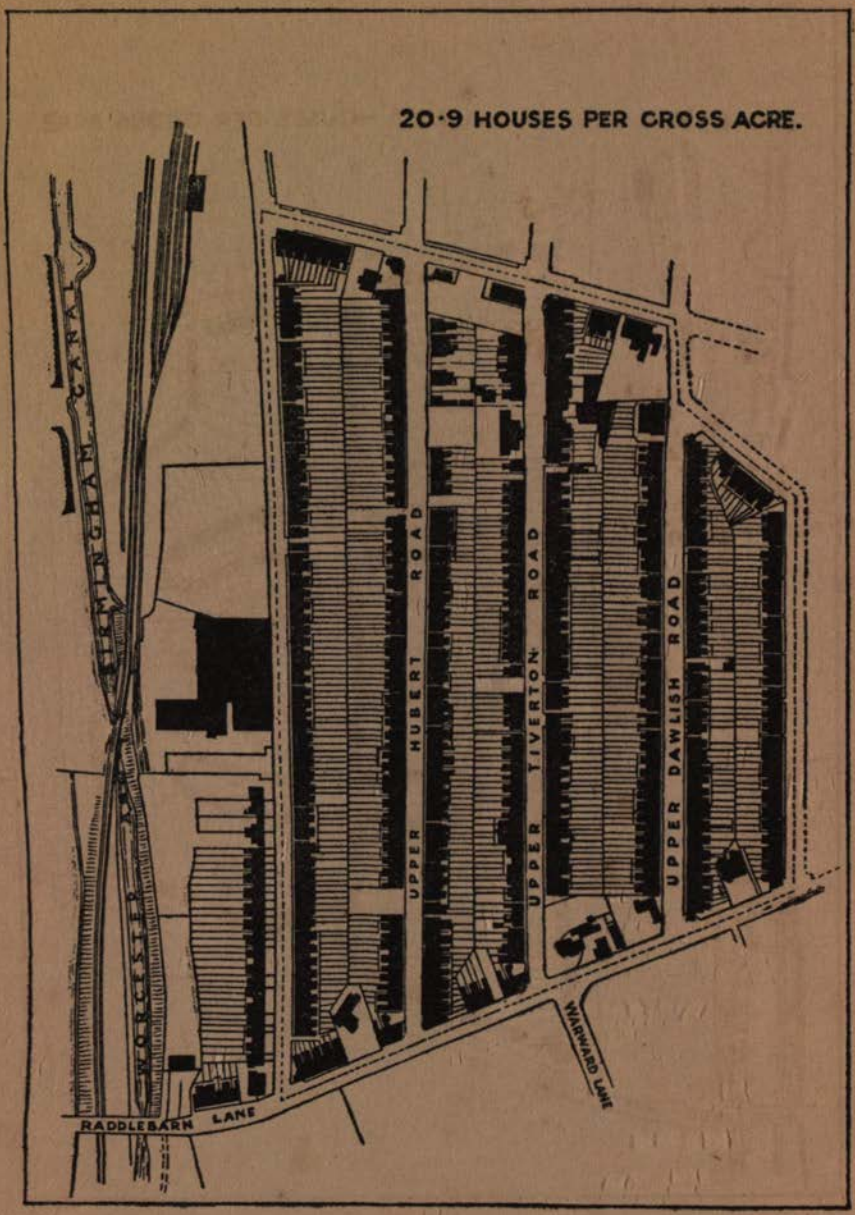
"It is interesting to note that there is a higher moral tone, self-respect is more in evidence, and a keener love of home prevails; the children are also better cared for, more suitably clothed, and are placed in an environment which is bound to be productive of much moral and physical good."

Town Planning, with its provisions for limiting the number of houses to the acre, provides another obstacle to the erection of slum property, and can thus do much, not only to save future expense to the rate-payers, but provide the healthy environment for the workers in the city.

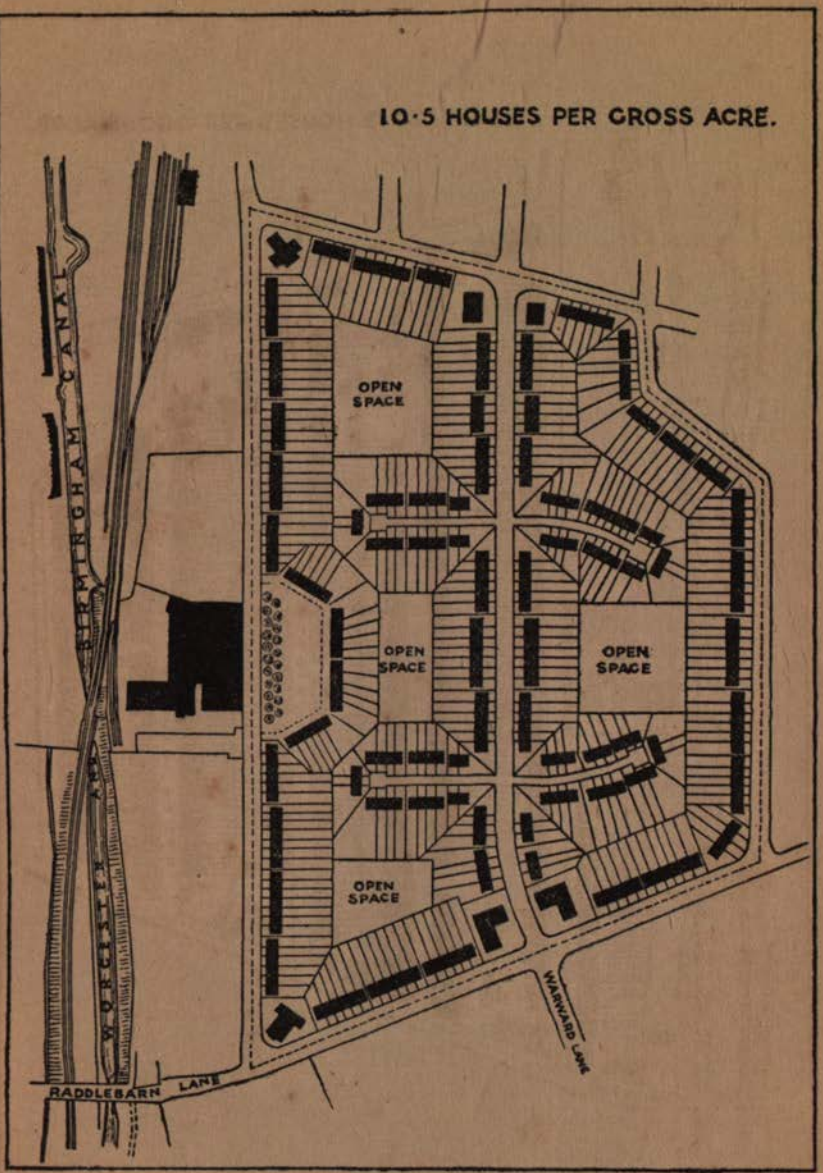
Charles Dickens realised how great was the part Housing conditions played in the national life when he said:—

"I have systematically tried to turn fiction to the good account of showing the preventable wretchedness and misery in which the masses of the people dwell, and of expressing again and again the conviction, founded upon observation, that the reform of their habitations must precede all other reforms, and that without it all other reforms must fail."

But it may be urged that much of this slum property was erected seventy years ago, and it is unlikely that such mistakes will be repeated in the same form; yet an examination of the recent building in great cities will serve to emphasise the need for Town Planning.



ACTUAL DEVELOPMENT OF AN ESTATE



THE SAME ESTATE ON GARDEN CITY LINES

"The mere natural increase of population continually deepens the evil. On the edges and outskirts of these cities great working-class suburbs of jerry-built houses are created, which will form in the future a problem as absolute as the problem now resident in the central districts."*

Rows of dreary, monotonous houses in dreary and monotonous streets will no longer serve to meet the demands of the workers.

The chart on page 10 shows the development of a working-class area in the city of Birmingham. The following chart shows an alternative development which might so easily have been adopted with very little additional expense, and with the greatest possible benefit to the dwellers there.

In the chapter devoted to the limitation of the number of houses to the acre, figures relative to these two charts are given,† and here it is sufficient to say that whilst the present development with twenty houses to the gross acre demands a ground rent of 4d. a week, the development shown in the second chart with the ten houses to the gross acre demands a ground rent of 5½d., or an increase of 1½d. a week. In the first case the average area of the plot per house is 188 yards, and in the second case it is 244.

Illustrations of this kind might be multiplied. The accompanying illustrations show houses in the same district of Birmingham with a rent of 5s. 3d. per week. It cannot be denied that all the advantage lies with the Garden City development.

It is clear then that the evil to be guarded against is more than the mere erection of unsuitable dwellings.

* C. F. G. Masterman, "The Heart of the Empire."
† See page 106.

HOUSES AT SAME RENT, STIRCHLEY AND BOURNVILLE.

It is a question not only of health, but of amenity. It would be safe to say that there is practically no county in England at the present time which could not show overcrowded and unsightly areas, which, a few years ago, were part of the ordinary countryside.

"Two generations back Walworth consisted of Public Gardens; Camberwell was a pretty and peaceful suburb; Wandsworth an old-world village by a quiet stream. In less than 50 years we have converted these into acres of desolation—stagnant aggregations of neglected humanity."*

It is perhaps advisable at this point to make clear the relationship between Town Planning and Housing. Housing pure and simple deals with the problem of improving old and insanitary houses, either by structural alterations or by re-housing schemes, and also deals with the necessary stimulus for the provision of new houses where the existing supply is inadequate. Town Planning, on the other hand, does not deal with the actual provision of houses, but forms the basis upon which good Housing schemes may be formulated. By a wise control of the land, by specifying the general conditions which must govern its development both as to transit provision and open spaces, and the limitation of houses, it can prevent some of the evils incidental to overcrowding, and can checkmate land sweating—that is, the desire to get the maximum return from land irrespective of the comfort and health of its inhabitants. It can, in its general provisions, modify by-laws as to building construction, and the cost of streets where the whole district is taken in review and all the conditions are known, and where at the same time the necessary restrictions may also be imposed, and do a great deal to simplify the Housing problem. It can also

* From "The Abyss," by C. F. G. Masterman.

define, to a certain extent, the character and height of buildings, and regulate the type of houses—for instance: whether to be inhabited by one or more families, but it is not concerned with the actual provision of houses, the financing of schemes, the assisting of Public Utility Societies, the clearing away of slums, all of which are more adequately dealt with in parts 1, 2, and 3 of the Housing Act of 1890, and the parts of the Amending Act of 1909 which referred to them.

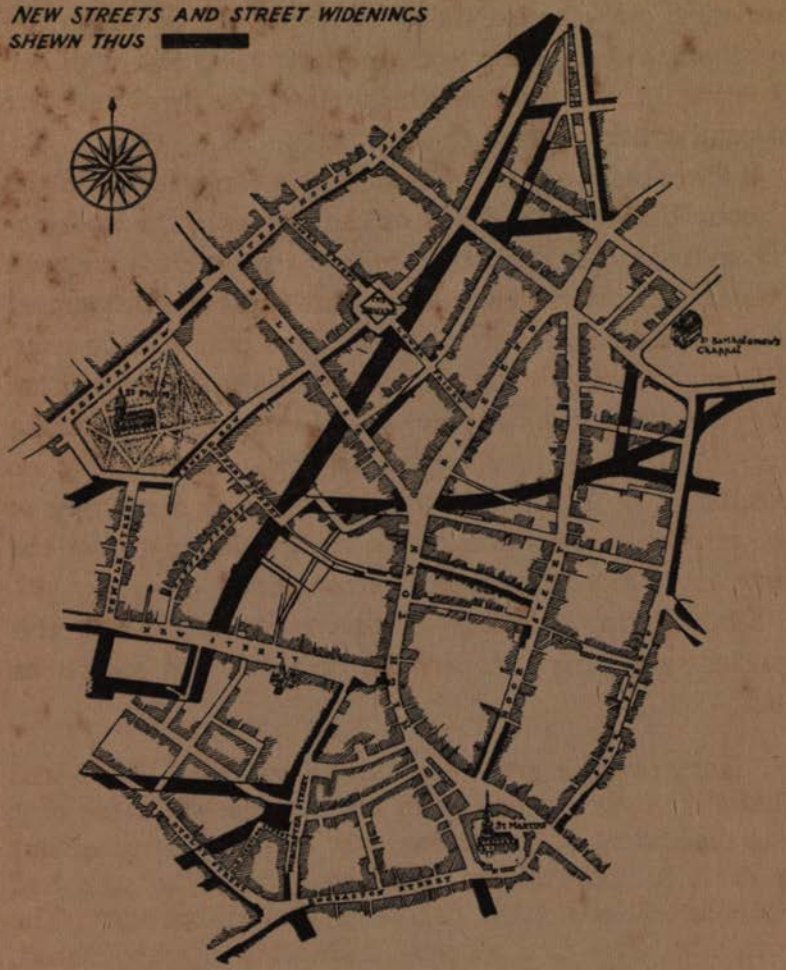
Undoubtedly at the present time a large factor in the Labour Unrest is the desire of the masses of the working-classes to obtain the means to live a proper life for both themselves and their families. One aspect of this unrest is their dissatisfaction with the present housing conditions, not only in the older parts of towns, but because they see little improvement in the vast acres of suburbs growing up round the cities, and that there seems no possibility of getting away from the dull monotony of the streets, and no chance for their children to get the freer air of more countrified surroundings.

Lord Derby speaking in Liverpool emphasised this matter very strongly. In the course of his speech he said:—

"They heard a great deal nowadays about 'Industrial Unrest.' It would be idle to say that the sole cause of it was discontent of habitation, but to a very large extent it must be allowed that bad housing in the past had contributed in a large degree to that discontent. The man who lives in a gloomy, unhealthy neighbourhood, must of necessity be affected by his environment, and still more must his children who grow amid such surroundings be affected."*

* Speech at laying a foundation-stone, Bevington Street Area, Liverpool, 1910.

PLAN OF BIRMINGHAM 1750.



This undoubtedly is the force which lies behind the demand for Town Planning, and unless Town Planning schemes meet this demand in a generous spirit, providing amply for this unsatisfied longing, they will be doomed to failure.

Important as all this is, the evils of modern city life are not confined to Housing. Are we satisfied with the streets of our cities? Are they as wide and direct as they should be? They have generally followed the lines of some old country lane, tortuous and indirect, and have been widened from time to time at enormous expense. In some cases entirely new streets have had to be formed, such as Kingsway through the heart of London, and Corporation Street through the heart of Birmingham.

A recent example is the case of Broad Street, Birmingham, which, in order to be widened at one end, involved the city in an expenditure of £40,000 for the purchase of some 100 square yards of land.

The cost of street widenings has never been computed in this country on any comprehensive scale, but a few typical cases during the last ten years will perhaps give some idea of the vast expense involved :—

	£
Birmingham	876,153
Hull	841,159
Bristol	511,322
Liverpool	1,331,850

Not only have main thoroughfares been entirely inadequate in the centre of the city, but in the outlying districts 80-ft. to 100-ft. roads will become necessary to deal with the ever-increasing traffic. The growth of motor-cars alone during the last six years is sufficiently indicative of what these demands will be. The following

estimates have been made by *The Car* from year to year :—

Year	Motor cars	Motor cycles	Heavy motor vehicles	TOTAL
1906	49,300	48,700	3,200	101,200
1907	65,800	55,000	4,520	125,320
1909	101,169	73,821	6,765	181,755
1912	175,247	132,245	12,627	320,119

Mr. Harold Collins, the Deputy City Engineer for the City of Norwich, estimates that these vehicles will probably travel 900,000,000 miles annually. The chief point to notice is that those which have increased most rapidly are those which require most road space, viz. the heavy motor vehicles.

At the same time an unnecessary standard of road is insisted on for estate development, which again affects the rents of houses.

The scientific development of our industries too may be materially assisted by Town Planning, which affords the best possible facilities with the minimum of inconvenience. Factories scattered all over the town are obviously at a disadvantage owing to their remoteness from railways and canals, entailing heavy and unnecessary traffic through the streets ; and much annoyance is also caused to business and residential property. The injury, therefore, owing to lack of proper control, is not merely to the factory, but also to the community. A noisy factory with its drays is a great nuisance to the people living near, besides blocking the streets with heavy traffic, which not only impedes other traffic but destroys the surface. In Frankfort a park belt is provided between the factory area and the city, which serves the dual purpose of cutting off the noise and smoke from the houses and at the same time furnishing a place

where the work-people can take some recreation during meal times. A very good illustration of these points is to be found in the city of Boston, U.S.A. In that city there are several goods depots belonging to various railway companies situated in different parts of the town. This necessitates in many cases goods being moved from one depot to another in course of transport, and it was estimated by the Commission on Town Planning that each year this cartage of goods necessitated a waste of 6,000,000 ton-miles. It was estimated that the cartage required 2000 carts, each carrying one ton load, making a journey of twenty miles daily.

In all our old cities, which when they were built had the country closely round about them, practically no provision for open spaces was made, and it is now an expensive thing to provide parks and spaces for city dwellers. Even in those cities where such provision is made, parks are badly distributed, leaving many parts of the town still remote from such amenities. Proper laying out of the city would provide that every house is within reasonable distance of some open space. The school playgrounds are cramped, and there is an absence of flowers and trees, the presence of which might do so much towards making life brighter and more healthful. The lack of sufficient open spaces also reacts seriously on the health, especially of the children, and makes them precocious and their lives unnatural. There cannot be any true childhood in the absence of contact with Nature.

In general, then, the extension of the city on the old lines is altogether undesirable. It blights the country-side with dreary rows of bricks and mortar; it destroys imagination and the free play of child-life; it compels men and women to an environment of sordid monotony unrelieved by any touch of Nature; it results in tortuous

streets taking their toll of human life ;* it is expressed in high sickness and death-rates, and in criminal statistics ; it involves the expenditure of vast sums on slum-clearance, on hospitals, asylums, workhouses, and sanatoria ; and its outcome is misery, disease, and waste.

It is a terrible indictment of the modern city, and, of course, it is not possible to remedy its evils in a short time, even at tremendous cost.

Town Planning can do little to eradicate these evils in existing cities, but it can prevent the repetition of these mistakes in the adjoining undeveloped districts.

Incidentally, by making it easier for manufacturers and the population generally to move out into the suburbs, it will tend to make the problem of existing cities somewhat simpler in the future.

The great thing is that the land should be under the control of a responsible body which should be able to treat it as a whole, harmonising the various interests.

All the Housing Bills had failed to give this essential power of control of the land. Places of natural beauty were destroyed, and one has watched with dismay the disappearance of fine timber and the ruthless way in which sites of much natural beauty have been cleared away in the south of London and other districts where, with a little care, these might have been made one of the greatest assets for the development of the growing suburb. With great difficulty the beauties of Richmond Park have been preserved by the efforts of a few zealous people, while the community as a whole has had no power to deal with the problem and prevent what might have been irreparable loss.

It is essential that English Town Planning schemes

* In the city of Birmingham, in the year ending 31st December, 1912, 1213 people were injured and 40 people were killed in street accidents.

should avoid the evils which German schemes have set up. The principal cause seems to have been the demand for wide and expensive roads in all directions, which not only has entailed an enormous cost in construction, but which has absorbed such a large percentage of the land that the landowner has been compelled to extract from what is left a return sufficient to cover all the expense to which he has been put. An endeavour has been made to counteract these evils in England by cheapening road construction, by limiting the number of houses to the acre, and by opening up access to cheap land.

A further attempt to deal with the town as a whole, and not merely as a suburb as at Bournville and Hampstead, has been made at Letchworth, in which all the problems of a town have been faced, including the provision of Factory Areas, Public Squares, Shopping Centres, the proper treatment of Public Buildings, the Housing Problem, and the idea of saving for the city the whole of the increment value was created by owning the whole of the land upon which the city stands, and by surrounding the city with an agricultural belt.

Town Planning in America has been concentrated almost entirely upon the provision of parks and open spaces, and they have not yet any Act at all comparable with the English Town Planning Act. One of the most important factors which differentiates the question of Town Planning in England from that of other places is the Englishman's desire for a house—a home, and not a tenement.

An attempt to meet the Housing problem is found in the Garden City movement, although the vision of better cities has never quite been absent from the minds of men.

In 1817 Robert Owen published a description of his

"Model Town Harmony," and in 1845 a proposal was put forward for a Garden Village at Ilford.

In 1895 Mr. George Cadbury commenced the building of his Garden Village at Bournville, and Mr. Ebenezer Howard has said that it was the inspiration of Bournville which largely affected his vision of the Garden City.

Bournville was a practical attempt to bring ideal housing conditions within the reach of working people, and its success has been remarkable. In the Deed by which the Estate is handed over to the Trustees, the Founder has clearly set forth his object :—

"The Founder is desirous of alleviating the evils which arise from the insanitary and insufficient accommodation supplied to large numbers of the working classes, and of securing to workers in factories some of the advantages of outdoor village life, with opportunities for the natural and healthful occupation of cultivating the soil."

Other Garden Villages also exist at Port Sunlight and Earswick, and Garden Suburbs at Hampstead, Ealing, Harborne, Ilford, Liverpool, Manchester, and elsewhere.*

The passing of the Town Planning Act brought about a new situation in England. The land within the area of the Garden City had been a separate unit within the control of one owner, but the land within the power of a local authority under the Act is in the occupation of many owners. The Local Authority, therefore, has a very different question before it, and it can only proceed successfully by methods of co-operation and agreement with landowners.

Town Planning seeks to make the city of the future not merely a beautiful city, but a city planned and

* Full particulars of the Garden City Movement will be found in a useful little brochure, written by Mr. Ewart G. Culpin, entitled "Garden City Movement Up-to-date."

controlled in the best interests of all the various classes who combine to make up the population of a city.

Section 54 (1) of the Act says :—

"A Town Planning scheme may be made in accordance with the provisions of this part of the Act as respects any land which is in course of development, or appears likely to be used for building purposes, with the general object of securing proper sanitary conditions, amenity and convenience in connection with the laying-out and use of the land and of any neighbouring lands."

The Act gives great powers of control to Local Authorities,—enabling them to bind the land as soon as leave to prepare a scheme has been given, and when the scheme has received the force of an Act of Parliament to carry it out absolutely, making any person who contravenes the scheme remove at his own cost any building which obstructs or is not in accordance with the scheme. That Public Authorities all over the country appreciate the value of being able to control the development within their areas is shown by the fact that thirty-three schemes are either in operation or are in their final stages. Many other Local Authorities have schemes in hand, and a great many more are holding their hands until they see something of what the practical effect will be. Public opinion is aroused to the necessity for improving the conditions under which the great masses of the population live. The workers themselves are becoming increasingly dissatisfied ; their eyes have been opened by glimpses of what might be in the present Garden Cities and suburbs which have been laid out in various parts of the country, and they are becoming conscious of the fact that the Town Planning Act will provide the instrument by which these better conditions can be realised more universally.

CHAPTER II

TOWN PLANNING IN BIRMINGHAM AND DISTRICT

THE enlargement of the city boundaries in 1911 presented a great opportunity to the Town Planner in Birmingham.

The area of the old city was 13,477 acres, and the area of the enlarged city is 43,537, 55 per cent of which is yet undeveloped. Indeed, it may be said that the necessity for Town Planning in the outlying areas helped to make Greater Birmingham possible.

The following figures were supplied when the enlargement of the city was contemplated :—

	Rivers, Railways, Parks, etc., not available for buildings. Acres.	Area already built upon. Acres.	Area available for buildings. Acres.	Total. Acres.
1. City of Birmingham (including Quinton)	3335	6568	3574	13477
	9903			
2. Aston	943		nil	943
3. Erdington	1562 including part of the Drainage Board's Farm.		3068	4630
4. Handsworth	133	1784	1750	3667
5. King's Norton .... (added area only)	460	2174	10858	13492
6. Yardley..... (approximately only)	2530		5059	7589
	19489		24309	43798

The old maps here shown give some idea of the unregulated growth of Birmingham, and the map of Birmingham in 1750 has been used to show the street widenings in the centre of the city which have taken place since then, the cost of which has been a heavy burden on the rate-payers.

The areas included in the Extension Order were King's Norton, Yardley, Erdington, Handsworth, and Aston. The number of persons to the acre in the Old City was 41·3, but in King's Norton it was only 6·4; in Erdington it was 7; and in Yardley 7·6. This again emphasises the nature of the land included.

The migration from the centre of the city to the outskirts—common to all cities—is already strongly marked in Birmingham. In June, 1911, the Overseers' books showed 7931 void houses from the Old City of Birmingham, whilst in February, 1912, within a quarter of a mile of the centre of the city, the number was found to be 397. This city migration has been accentuated of course in recent years by the increased facilities for transit, and the Town Planning Committee saw quite clearly that the mistakes of Old Birmingham would be quickly repeated in the new areas, unless some Town Planning scheme or schemes were adopted in which building might be regulated. It cannot be too strongly emphasised that it is only by wise regulation of the city's growth that future expense may be saved.

Birmingham has had the inestimable advantage of having several instances of enlightened "Estate Development" within its borders. On the west is the suburb of Edgbaston, which was exclusively in the occupation of one owner, and which has been planned with much foresight as a residential suburb, so that to-day in close proximity to a busy city there exists a large residential

The PLAN of BIRMINGHAM, Survey'd in the Year 1731.

To
the Honourable
Edw.d Digby & Cecill Peyto Esq.rs
Members of Parliament
for the County of Warwick
this Plate is humbly Dedicated
by their most obed.t humble Serv.t W. Westley

In the Year 1700 Birmingham Contained 400 Houses two Courts and 1 Lane 4 or 5 Houses 1500 Inhabitants one Church dedicated to St Martin one Chappel to St John & a School founded by Edward Taylor & Dissenting Meeting Houses

In the Interval of the Town from 1700 to 1731 as as follows 23 Streets 3 Courts & 1 Lane 615 Houses 4634 Inhabitants together with a new Church Charity School Market Cross & 2 Meeting Houses

population living in good houses with ample gardens and open spaces. Then again there is the district of Saltley, and for this example of Town Planning the city is indebted to the late Lord Norton—better known as Sir Charles Adderley—who planned Saltley when the population only numbered four hundred, "anticipating the coming population and seeking not to enlarge his property but to get it into good order that when he died it might show good stewardship."

Two modern examples also exist within the boundaries of the city, the Estate of the Bournville Village, and the Estate of the Harborne Tenants, Ltd.

The total area of the Estate of the Bournville Village is 672 acres. Its population is 4390, and the density of population on the part that is developed is 25 persons to the acre. The houses are limited to one-fourth part of the sites upon which they are erected, and they work out at about eight to the gross acre.

In 1906 the Bournville Village Trust leased twenty acres of its holding to the Co-partnership Society known as the Bournville Tenants, Ltd. For every nine acres of land which the Society takes from the Trust, one acre is given by the Trust for open spaces, and for every £3000 subscribed to the Society, Mr. Cadbury advances a loan of £1000, until the total by this means has reached £28,000.

At present 142 houses are built at a maximum density of 7·9 per gross acre, or including the land given for open spaces 7·1. The total area is 20 acres, and the population is 750.

At Harborne Tenants, Ltd., the area is 54 acres situated 2½ miles from the centre of the city. Five hundred houses have been built, and the population is 1600. Nine acres of land have been given up to allotments and playgrounds.

With these examples before it, Birmingham would seem to be a place where Town Planning ought to meet with a large amount of public support, for it is clear that without a large measure of public confidence and support the schemes in themselves cannot be successful.

Further, the growth of fast motor traffic has brought home to the public within recent years the great danger of the streets, and the unwisdom of allowing cities to grow up without any foresight as to the future. Even now, Birmingham has no main route from north to south, or from east to west, which at some point does not pass through narrow and congested streets, and the public will be willing to support Town Planning as soon as it realises the advantages that are to be derived from it.

The present methods are extravagant, stupid, and wasteful, and it lies with Town Planners to show that Town Planning methods are economical, wise, and advantageous. It may be said at once that Birmingham has taken a prominent part in applying the Act, and occupies the proud position of the pioneer Local Authority in the United Kingdom in Town Planning.

The problem before the city was one of considerable complexity. The population had increased from 634,579 in 1891, 759,887 in 1901, and 842,337 in 1911 :—

	1891	1901	1911
Birmingham.....	478,113	522,204	526,030
King's Norton and Northfield	28,300	57,122	79,812
Yardley	17,141	33,946	60,000
Aston Manor	68,639	77,326	74,985
Erdington.....	9,630	16,368	32,500
Handsworth	32,756	52,921	69,010
Greater Birmingham ..	634,579	759,887	842,337

These figures are extremely instructive, and show quite clearly the kind of problem confronting the city.

It will be observed that whilst the population of the old city and Aston Manor is almost stationary, King's Norton and Northfield has almost trebled itself in twenty years; Erdington has practically quadrupled itself, Yardley has more than trebled itself, and Handsworth has more than doubled itself.

Nothing could emphasise the need for Town Planning more than these significant figures. Indeed, the general position and character of the enlarged city of Birmingham make it of special interest to the Town Planner.

It lies on a high tableland, its western and southern boundaries following closely the watershed of England. The land is undulating, intersected by valleys through which run many small streams contributing to the River Rea, which falls from the south-west boundary of the city through the centre of the city, until it ultimately joins the Tame near Saltley.

The northern boundary of the city follows the River Tame for a few miles, the only portion of the city extending beyond it being the residential suburb of Erdington.

The Yardley district on the south-east lies within the valley of the River Cole.

Thus, the city though high-lying has well-watered valleys, though the rivers are of no great size. Birmingham, undoubtedly, owes its prosperity to its healthy and bracing climate, and industrially its prosperity is due to its proximity to the coal and iron fields of South Staffordshire and North Warwickshire.

On the other hand, the city is most severely handicapped by the absence of navigable rivers or efficient canals, its distance from the sea being a great drawback

Moreover, lying as it does on the watershed of England the water supply is limited, and has entailed obtaining water supplies from Wales at enormous cost. It also makes the question of canal navigation on a large scale a matter of the greatest difficulty.

The districts on the south and west are very healthy and bracing, and, as a rule, are free from smoke.

At present much of the land in these districts is purely agricultural, being poorly served with transit facilities except by railway and canal routes to Worcester; but it will undoubtedly afford excellent sites for residential areas. The Erdington district also is healthy and well laid out, and is situated near to the great open space of Sutton Park.

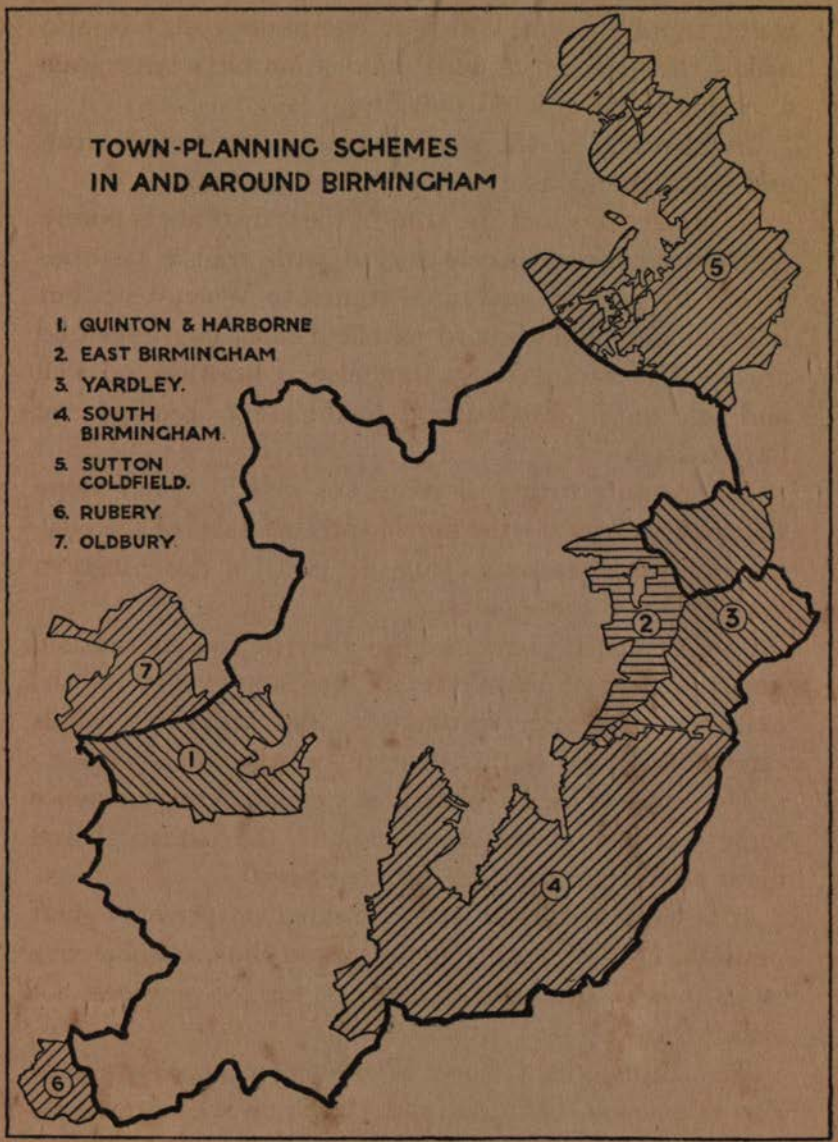
The manufacturing districts are mainly found along the river valleys on the north and east sides of the city, the canals and railways from all parts of the Kingdom converging on these parts.

The Municipal Gasworks, the Electric Supply Station, and the Sewage Farm are in the Tame valley on the extreme east, and, fortunately, the prevailing winds carry the smoke of this district away from the city.

The centre of the city stands on a commanding eminence some 500 feet above sea-level, and the cathedral and main public buildings are situated here.

It is clear, therefore, that Birmingham presents great opportunities for Town Planning, and the chief objective is to reserve the various districts for the purposes for which they are best fitted.

The Birmingham Town Planning schemes comprise the Edgbaston, Quinton, and Harborne scheme of 2320 acres, the East Birmingham scheme comprising 1763 acres, the North Yardley scheme comprising 3164 acres, and the South Birmingham scheme comprising


TOWN-PLANNING SCHEMES
IN AND AROUND BIRMINGHAM
1. QUINTON & HARBORNE
2. EAST BIRMINGHAM
3. YARDLEY.
4. SOUTH BIRMINGHAM.
5. SUTTON COLDFIELD.
6. RUBERY
7. OLDBURY
1
2
3
4
5
6
7

8400 acres. It is hoped that quite shortly the whole of the outlying portions of the city will be scheduled as Town Planning areas.

The outlying schemes adjoining the city include Sutton Coldfield, 6400 acres; Oldbury, 1763 acres; and North Bromsgrove, 554 acres. That is to say, that in Birmingham and district nearly 24,400 acres are at present included in Town Planning schemes.

The accompanying maps show at a glance the amount of undeveloped land within the city, and the Town Planning schemes already in hand both inside the city and immediately adjoining.

The Edgbaston, Harborne, and Quinton scheme is the pioneer scheme, and lying as it does upon the south-west side of the city it has been planned as a residential suburb.

The main objects aimed at in this scheme were :—

(1) The planning of suitable roads, both ring and radial, thus ensuring communication between the area and the centre of the city, and intercommunication between the various parts of the area.

(2) The allocation of sites for various purposes, thus ensuring that the land is used to the best advantage, both from the point of view of health and economy.

(3) The provision of open spaces.

With regard to (1) : the probable traffic of the area was considered, and this included provision for means of transit, and allowance was made where necessary that in the event of tramways being required they could be run down the sides of the roads upon separate tracks with many advantages over the ordinary system. The various widths, modes, and times of construction, and all matters relating to roads in general will be found in the chapter devoted to that purpose. The scheme pro-

CITY of BIRMINGHAM
THE MAP REFERRED TO IN THE
QUINTON KNOWLE & EDGBASTON
TOWN PLANNING SCHEME

vides that the Corporation shall make all " through " new roads, recouping themselves from the landowners as the frontages develop, the landowners only contributing the cost of what a 42-ft. road would have been. It is intended that the intervening areas shall be planned by the owners themselves, plans being submitted to the Corporation for their approval. The Corporation has the power under the scheme to modify the ordinary by-law requirements, and having made suitable provision for heavy through traffic they may allow side roads to have a much narrower width of macadam. For the guidance of landowners, sections of such roads are shown. It is interesting to notice that up to the present no serious objections have been made by landowners to these proposals.

With regard to (2) the allocation of sites: as this area is designed as a residential area no provision has been made for factory sites, although in the East Birmingham scheme, which is an industrial area, very complete arrangements have been made for factories, which are discussed in another place. The building of shops, theatres, picture houses, churches, hotels, etc., also received the consideration of the committee, and there is little doubt that this part of the work is all especially difficult, but the clause raising the most difficulty is Clause 17, which gives the committee power to limit the number of houses to the acre. The calculation as to the number of houses which shall be built is arrived at by fixing an average and a maximum, and the Corporation asks for a plan to be submitted, not only of the land which is proposed to be developed, but also the adjoining land if such is within the area of the scheme, whether it belongs to the same owner or not. If the adjoining land or any part of it belongs to the same owner he is asked

to furnish a plan of the adjoining land he owns, both immediately adjoining or even elsewhere in the area. The other landowners are also asked to send in a plan of their land which adjoins. The area either containing a part of the whole or more than the land proposed to be developed is thus marked off by the Corporation and is called a "land unit." Upon this "land unit" an average number of houses only may be built, and in the case of the Quinton scheme this has been fixed at twelve to the gross acre, and in no case must there be more than twenty houses to the acre. This matter is fully discussed in the chapter especially devoted to the consideration of this question.

With regard to (3) open spaces: a large provision for ornamental parks was deemed unnecessary as there is ample provision on the borders of the area. It was felt, however, that playing-fields would be a great public boon, and so four of these were provided. It is hoped that others will be provided either by gift or purchase as the area develops.

The East Birmingham scheme comprises all the undeveloped land between the eastern limit of the city and the old city boundary. The area is long and narrow, stretching three miles from north to south, and one and a quarter miles east to west at its broadest part. It is traversed by three main lines of railway and one branch. The northern boundary is the Midland Railway from Birmingham to Derby. In the centre is the London and North Western Railway to London, and on the south the Great Western Railway to London. Half the eastern boundary is formed by the River Cole. The main characteristics of the area are that it is gently undulating, the high land being in the centre with low-lying land on the south-eastern and

northern boundaries. The general character of the district is industrial. In the centre is the Ward End Park of 54½ acres, and just to the north the well-timbered estate of Ward End Hall with its old church and moat. There are practically no roads from north to south, while the Cole has formed a natural barrier on the south-east, the Yardley district being particularly inaccessible.

The obvious problems to be solved, then, were the provision of good roads in both directions, the provision of factory areas, the provision of working-men's houses, and the control of the Cole Valley. This latter problem proved very troublesome, as the inclusion of only one side of the river made it impossible to deal with any river works or straightening. Consequently, the river valley was taken out of the scheme and is to be included in the Yardley scheme when that is prepared.

The North Yardley scheme was taken in hand soon after Greater Birmingham became an accomplished fact. This embraces an area of 3164 acres and extends from the boundary of the East Birmingham scheme on the west to the new city boundary on the east, and from the Midland Railway on the north to the Coventry Road on the south. It thus takes in practically the whole of the Rural District of Castle Bromwich in the county of Warwick and a small piece of the parish of Minworth. This area is almost entirely rural, being traversed by the London and North Western Railway and the Midland Railway on the north. There are very few main roads in the area, and the chief problems to be solved are the provision of main roads, open spaces, and dealing with the River Cole. The land is undulating and well timbered, being naturally very suitable for a residential area. Though parts of it are little more than three miles from

the centre of Birmingham, development is very backward owing to a lack of good communication by road. There is a tram route on the southern boundary. No complications are feared from the fact that three Authorities are concerned in the scheme, as all are working in harmony. It is very important that Castle Bromwich should be included, as Birmingham surrounds it on three sides.

The latest scheme is that of South Birmingham. This huge area of 8400 acres extends from the Coventry Road on the north round the south side of Birmingham to the Pershore Road on the west. The outer boundary on the south-east follows the city boundary, while the inner line follows the irregular line of built-up areas, skirting Sparkbrook, King's Heath, and Moseley. The northern part is industrial, and to some extent the south-western part, but the area as a whole is residential. It is traversed by the Great Western Railway main line to London and the direct line to Stratford, and by the Midland Camp Hill line to Bristol. Tramways penetrate the area at four points. There are several important main roads crossing the area, but communication from north to south is poor. The northern and western boundaries run along the Warwick and Worcester Canals respectively, while the Stratford-on-Avon Canal traverses the district for a considerable distance. The greater part of the area drains into the Cole, while a smaller part drains into the Rea. There are two small areas which drain away from the Birmingham Drainage Area. The central part of the district is developing on good-class residential lines, while factories are extending rapidly in the north. The problems to be faced are the provision of better communication north and south, the straightening and widening of many existing roads, the

provision of ample open spaces, the provision of factory areas, and the development of good-class and working-class residential areas. The valley of the Cole will also have to be dealt with in order to save floods and probably to make a river walk. Some 8000 notices have had to be served on owners and occupiers.

Outside the city the most important scheme is that of Sutton Coldfield. This embraces an area of 6400 acres. The chief characteristic of Sutton is its park, which preserves a piece of wild, open, and well-wooded country covering 2400 acres. The scheme provides for good-class houses bordering the park, limited to four to the acre. While also ensuring that good houses are built in the rest of the area, the scheme includes an "island" of private property in the centre of the park, and steps will be taken to ensure that the amenities of the park are preserved. Sutton is almost entirely residential, and lies on high land which is very healthy. A scheme of this kind, therefore, will prove very beneficial and help to preserve the character of the town.

The Oldbury scheme comprises 1763 acres. It lies on the west side of Birmingham on the highest land near that side of the city. The boundary joins that of the Quinton scheme for two miles, and will help to preserve the amenities of that scheme. The well-wooded open space of Warley Park, belonging to Birmingham, is included in the scheme, and the houses round the park are limited, at the request of the landowners, to ten to the acre. The general average is to be fourteen to the acre, and in one small corner is to be eighteen. The land lies high, reaching over 700 feet at the highest point, and slopes from the south-eastern boundary down towards Rowley on the west. The southern boundary adjoins the Birmingham boundary and the Quinton and Harborne town-planned area on

the south; while it is bounded by Smethwick on the north and east, and includes part of Cakemore in the Urban District of Halesowen on the west. The greater part of the area is industrial, adjoining the district known as the Black Country on the western side. However, part of the land lies high, and commands fine views over Worcestershire. Access is obtained by tram with Birmingham on the eastern boundary, and by rail on the western boundary. The problems to be solved are the best development of an industrial area, the housing of a large working-class population, and the proper development of the residential district at Warley. The most interesting question is whether, in conjunction with other South Staffordshire districts, the new much-needed Wolverhampton Road can be made, the eastern end of which will pass through the centre of this area.

The smallest scheme is that of North Bromsgrove—round the village of Rubery. This scheme includes the whole of the watershed in the Rea Valley, which naturally drains into the Birmingham area, and a small portion in the Chadwich Valley, which drains into the Severn. The land is high-lying, and is beautifully situated on the northern side of the Lickey Hills. Its eastern boundary is the city of Birmingham. It is reached by train on a small branch line, and by a service of motor buses along the Bristol Road from Birmingham. The outstanding feature is the large amount of open space owned by the Birmingham Corporation on the Lickey Hills, and the chief problem is to preserve all the best natural features for a residential district. Just outside the area there is a large motor works; otherwise the district is at present entirely agricultural and residential.

It will thus be seen that the schemes in and around

Birmingham cover a variety of conditions and require entirely different treatment of the details.

The subsequent chapters will deal with the necessary steps in the preparation of the Town Planning schemes, and will discuss the contents of such schemes.

CHAPTER III

THE PREPARATION OF A SCHEME BY THE LOCAL AUTHORITY

THE preparation of a scheme may be divided into two principal stages, the first relating to the selection of the area, and the second to the actual preparation of the scheme itself for the selected area. In addition to the scheme which is approved by the Local Government Board, it is necessary to prepare maps and estimates, and much of the important work takes the form of agreements with landowners, which have to receive the approval of the Local Government Board.

The Selection of the Area.—It is clear that the Town Planning Committee of the Local Authority will have to use a wise discretion in the matter of selecting a suitable area to be dealt with. Owing to the diversity of conditions in various localities the problem will scarcely ever be the same for two Local Authorities. As the Local Government Board must satisfy themselves that the land is likely to be used for building purposes, however remote the period at which it will be built up, it is, of course, only possible to include in such an area land where there is some prospect of building development taking place. In many towns this will cover the whole of the undeveloped area within the borough. In Urban Districts it will probably cover areas contiguous to existing towns, or where, for some special reason such as new transit facilities, the land is likely to be opened

up for residential or manufacturing purposes. In some cases the area which will come under review is of such a character and extent that it can be all included in one scheme; whereas in other districts, such as Birmingham, it is necessary to adopt several schemes owing to the mere fact that the size of the undeveloped portion of the city is too great to be included in one scheme, not only because of the difficulty of dealing with all the interests concerned together, but also because of the length of time that the land would be bound and all developments stopped during the preparation of the scheme.

It should be noted that it is the duty of Local Authorities to consider whether there is any land suitable for Town Planning, and the Board have power to compel Local Authorities to prepare a scheme where they—

"61 (*a*) have failed to take the requisite steps for having a satisfactory Town Planning scheme prepared and approved in a case where a Town Planning scheme ought to be made; or

"(*b*) have failed to adopt any scheme proposed by owners of any land in a case where the scheme ought to be adopted."

The largest scheme in the country at the present time is that of the Birmingham Corporation known as the South Birmingham scheme, covering an area of 8400 acres, and although this is the fourth scheme which they have in hand they have not yet covered much more than half the undeveloped area of the city. It is the hope of the Corporation to include the whole of the undeveloped land in the city in Town Planning schemes. Before the city was enlarged there were only two areas of any size which were not fully developed, and the council agreed to prepare schemes for these areas known respectively as the Quinton, Harborne, and Edgbaston scheme, which

included the newly-annexed Parish of Quinton; and the East Birmingham scheme, which covered an irregular area between the built-up part of the city and the eastern boundary of the city along the River Cole. When the city was enlarged some 30,000 acres were added, and it was found impossible to deal with the River Cole improvement by treating one side alone, therefore the next scheme to be taken in hand was the North Yardley area, which adjoined the East Birmingham area along the River Cole, and the Rural District of Castle Bromwich, which was surrounded on three sides by the extended city of Birmingham, two sides of which were included in other schemes for Town Planning. The last district to be scheduled is an area to the south of the two described above, covering the whole of the undeveloped land on the south-east side of the city following the city boundary along its outer edge, and the very irregular line of building development on the city side. As progress was likely to be rapid in this district the Town Planning Committee considered it was a matter of urgency that the whole of it should be included.

The chief questions which have to be considered in defining an area are three, and must be shown on Map No. 1:—

1. What land is likely to be used for building purposes within the area of the Local Authority.
2. What land belonging to a neighbouring Authority is essential to the formation of a scheme.
3. What land must be excluded.

In considering what land is likely to be used for building purposes the Act gives the following definition:—

"54 (7) The expression 'land likely to be used for building purposes' shall include any land likely to be

used as, or for the purpose of providing, open spaces, roads, streets, parks, pleasure or recreation grounds, or for the purpose of executing any work upon or under the land incidental to a Town Planning scheme, whether in the nature of a building work or not, and the decision of the Local Government Board, whether land is likely to be used for building purposes or not, shall be final."

The Local Government Board in their circular of December 31st, 1909, say :—

"The object of the Town Planning part of the Act is to ensure, by means of schemes which may be prepared either by Local Authorities or landowners, that in future land in the vicinity of towns shall be developed in such a way as to secure proper sanitary conditions, amenity, and convenience in connection with the laying out of the land itself and of any neighbouring land. Hitherto the conflicting interests of different owners and the absence of any power in the Local Authority to guide and control development according to the circumstances and requirements of particular cases has resulted to a considerable extent in the development of estates, whether large or small, with a sole regard to the immediate interests of the particular estate and without regard to the amenity and convenience of neighbouring lands. Nor can the landowners be generally blamed for what has taken place. Their powers have in the past been practically limited to their own estates, and the local circumstances connected with the interests of owners of neighbouring properties have often hindered development in the direction most in harmony with the interests of the community. Of course, much has been done by provisions in public general statutes, by-laws, regulations, and local Acts to secure sanitary conditions in the development of the land. But such provisions, which commonly apply to a whole district, are inherently inelastic in their character, and are not concerned with amenity and

convenience as affected by the particular circumstances of the actual land about to be developed.

"The Town Planning part of the new Act involves, in fact, a material advance in the relations between the owners of land and the Local Authorities in this country, and enables each party to co-operate with the other in promoting the general interest.

"The importance of co-operation on the part of the Local Authority with the owners and other persons interested in the land proposed to be included in a Town Planning scheme is fully recognised by the Act. Thus Section 56 (2) contemplates that the regulations to be made by the Board under that Section shall provide for securing this co-operation by means of conferences and otherwise at every stage. Again, amongst the matters to be dealt with by General Provisions under Section 55 is the power of the responsible authority to make agreements with owners, and of owners to make agreements with one another (Fourth Schedule, Paragraph 13). It is hoped that by means of conferences, agreement may generally be arrived at between the Local Authority and the owners concerned, before a scheme is formally submitted to the Board for their approval; and if it is thought that at any stage prior to such submission, the assistance or advice of any of the Board's experts might tend to facilitate such agreement, or to save labour or expense, the Board will be quite ready to arrange for such assistance or advice being given.

"The Board trust that councils in whose districts signs of development are visible will give very full consideration to the opportunities which the Act offers of guiding and controlling that development for the benefit of the community, and that in doing so they will bear in mind the heavy burden which has fallen on the ratepayers of many districts in the past in remedying defects of the kind which it is now within their power to prevent."

The Birmingham Town Planning Committee have found it convenient to form some idea of the general

lines on which the city is likely to develop. From the accompanying map will be seen that the main thoroughfares radiating from the centre to the circumference connecting neighbouring towns have been marked out as those upon which heavy traffic of all kinds is likely to concentrate. They have also outlined a ring road to by-pass much of the traffic which otherwise would pass through the centre of the city, and to connect up neighbouring suburbs. In addition, a general scheme of inter-connecting roads has been planned. In settling upon an area for a scheme such land should be included as shall provide for these roads to be constructed. This will often involve the inclusion of an already built up district where powers are required for widening existing roads.

In the Dunfermline scheme, one landowner objected to his land being included on the ground that it would not, in all likelihood, be built upon for the next twenty or thirty or perhaps fifty years. The answer on behalf of the Local Authority was that the land was considered "burghal" in character, and therefore it might be leased for building purposes at any moment, and that they could not very well run the risk of leaving these lands out. The Local Government Board took the view of the Corporation, and included the lands objected to.

In dividing up undeveloped land into two or three schemes, the question of size is an important factor, as, generally speaking, the smaller the size the more costly it is per acre to prepare a scheme. It is also convenient to consider the drainage area, though occasionally where small portions of land within the city are in another valley, it is simpler to schedule such land as an open space, and so avoid the expense of putting in a deep

drain or tunnelling or pumping. Some ten acres of land in the Quinton scheme were scheduled on this account.

In selecting which area shall be dealt with first, where there is a choice, the Corporation will naturally choose to deal with any large prospect of development and where there are greater facilities for transit. In North Yardley the village of Stechford is already built up, and has been excluded from the scheme. In East Birmingham there was a similar area excluded, but this is now admitted to be a mistake, as it has prevented the widening of one of the main connecting roads being properly carried out. For the same reason it is advisable to have connecting strips between the various parts of the scheme, especially along each side of existing main roads.

The question has been raised with regard to the inclusion of railways. In Birmingham all the land of the railway companies has been included, and an agreement arrived at with them as to the extent of the scheme.

The boundaries of the scheme should generally not be along a road, as it is important to have the road fully under control for widening and general development purposes. If unprotected on one side, a row of houses crowded together might be built and so entirely spoil the amenities of the district. It is therefore advisable for the boundary to run at a distance of a good building-depth on one side or other of the road. Similarly, a stream or river makes a bad boundary. This has been experienced in dealing with the River Cole in Birmingham. It was found impossible to evolve a scheme for the proper treatment of the river, which is liable to severe flooding, in the East Birmingham scheme, as straightening could not be undertaken, and, therefore, the actual treatment

of the river valley has been excluded and will be undertaken in connection with the North Yardley scheme. In cases of doubt it is advisable to include land, and to settle the question as to whether it shall be excluded or not at the Local Government Board Enquiry.

It is advisable, too, to prepare an ownership map, so that an owner's property is not cut in two. This leads to friction, and the remainder of his property cannot be included without delay and without repeating all previous proceedings. It is therefore much better to include or exclude an owner entirely, as it is easy to exclude afterwards, but impossible to include any land not originally shown in the scheme, or about which notices have not been served.

An interesting commentary on the foregoing considerations is supplied by the experience of the city of Sheffield. Eight Town Planning schemes are in progress, some of which are in the final stages. The Corporation began its Town Planning work by scheduling small areas, but experience has shown them that it is more convenient to schedule larger areas, and in consequence, the later schemes of the Corporation deal with much larger areas than the earlier ones.

The schemes at present under consideration in various parts of the country vary a good deal in size, from South Birmingham with 8400 acres, to Leeds with 6 acres.

Undoubtedly, one of the factors which influence the Local Authority in deciding whether to prepare a Town Planning scheme, and what the area shall be, is the question of cost. The cost to a Local Authority of preparing a Town Planning scheme varies so much with the circumstances that it is impossible yet to state definitely

what it should be. The considerations which will affect this matter are :—

1. The character of the land included.
2. What the scheme proposes to do.
3. The numbers of owners, lessees, etc.
4. The degree in which opposition to the scheme is encountered.
5. Whether expert advice is sought upon matters comprised in the scheme.
6. Maps.

The application of these considerations to various causes will be manifest at once. The scheme comprising large tracts of undeveloped land in the occupation of one or two owners will be cheaper than a smaller area in the occupation of fifty owners.

The Procedure Regulations issued by the Local Government Board prescribe in detail the steps to be taken in the preparation of a scheme, and because of their apparent complexity there is a danger lest Local Authorities should magnify the nature of the task before them and the ultimate cost. The apparent complexity of the regulations is due to the desire of the Board to meet any possible combination of circumstances in any locality, and that reasonable claims for relaxation or dispensation will be considered. An idea may be gained of the work involved in the preparation of a scheme from the following summary of a paper written by Mr. H. Lloyd-Parry, town clerk of Exeter, for the National Housing and Town Planning Association in 1912 :—

(1) The ascertainment of the names of owners, lessees, and occupiers and the service upon them and the Local Authorities interested, by post or otherwise, of notices or other documents upon at least five occasions.

The regulations require that at least two meetings of

interested persons, unless in the first instance private conferences are arranged for under Article III. b. 2, must be held for the discussion of the proposed scheme. If no more than two are held the notices of such meetings could be served together with one other of the prescribed notices so that the occasions for service need not exceed four.

Roughly the expense is confined to the service of notices (six are specified, but often two may be served together) upon the prescribed persons which, according to the new regulations, means—" the owners of the land included or proposed to be included in the scheme or proposed scheme " and under certain circumstances neighbouring Borough or Urban Councils, Board of Agriculture and Fisheries, Commissioner of Works, and the Board of Trade. The first item is, of course, the one where the most expense is involved both for referencing and postage.

It appears that the names of the owners and other persons interested in a scheme can only be obtained by a house to house enquiry, and great care is essential, for the omission of names may jeopardise the scheme or involve the authority in serious liabilities, although an omission, if purely accidental, may be overlooked, as provided for in Article XXII. It is to be regretted that no surer and more expeditious way of ascertaining these names could be devised, for this work contributes a serious item to the cost.

In some cases it has been found possible to obtain a list of owners from the rate-books, but this method is more liable to error.

(2) The preparation and supply of copies of five maps, all of which are to be on the scale of 25·344 inches to the mile. These maps are to be ordnance maps mounted on

linen. Map 1 may be used for map 2 with the additional details filled in.

The regulations require that a certified copy of map No. 1 shall be furnished by the responsible Local Authority to other Local Authorities affected by the scheme, but the Local Government Board have allowed a map on the scale of 6 inches to the mile to be substituted. These maps are required to indicate all existing and projected buildings, roads, open spaces, and lines of sewers and pipes or mains for the supply of water, gas, or electricity, with such descriptions and measurements as are required by the regulations. Map No. 5 is required to indicate the ownerships of the land, the names being indicated on the map itself, or by reference to an accompanying book. The first step in the preparation of these maps is to post the ordnance map up to date, but as this may be regarded as part of the ordinary administrative work of the Local Authority it is not a cost properly attributable to the Town Planning scheme. It will no doubt be found necessary in respect of the hilly areas to contour the maps more closely than is done by the Ordnance Survey. The work involved in the preparation of these maps is practically the measure of the work of preparing the scheme.

"(3) Printing of the various notices, draft order, and approved order for service on all persons interested."

"(4) Eight advertisements to appear each in one or more local newspapers, giving notice of the different stages in the preparation of the scheme."

(5) *Cost of Local Enquiries.*—The new regulations are designed to reduce the cost to the lowest figure, and they are an advance on the original regulations in that respect.

The cost of preparing the pioneer schemes are of little value as a guide, as such are always much more expensive than later ones, when the general form and content of such schemes has been more or less settled by precedent.

The Preparation of the Scheme.—The Act provides that all interests shall be amply safeguarded and that consultations shall take place at every stage.

"56 (1) The Local Government Board may make regulations for regulating generally the procedure to be adopted with respect to applications for authority to prepare or adopt a Town Planning scheme, the preparation of the scheme, obtaining the approval of the Board to a scheme so prepared or adopted, and any enquiries, reports, notices, or other matters required in connection with the preparation or adoption or the approval of the scheme or preliminary thereto, or in relation to the carrying out of the scheme or enforcing the observance of the provisions thereof."

"(2) Provisions will be made by those regulations:—

"(*a*) for securing co-operation on the part of the Local Authority with the owners and other persons interested in the land proposed to be included in the scheme at every stage of the proceedings, by means of conferences and such other means as may be provided by the regulations."

Procedure regulations (Article 13.).—"In connection with the preparation or adoption of a scheme the Local Authority shall carefully consider all objections and representations made to them in writing by any persons or councils interested or affected, including persons representing architectural or archæological societies or otherwise interested in the amenity of the proposed scheme."

It will be seen from the above that co-operation with landowners and others interested is an essential part of the Act. It is obvious that, short of the municipality owning the land, they must work hand in hand with all the interests concerned, and try by a wise discretion to

harmonise their various ideas and suggestions. The predominant consideration, however, must be the interests of those who will be ultimately most concerned, namely, those who will inhabit these residential districts, and the manufacturers and allotment holders who will develop them on the business side. It is remarkable how most of the objections which were originally raised have been met and an amicable settlement come to.

Special interests are also safeguarded, especially with reference to historical sites and monuments, and at every stage archæological and architectural societies have the right to be heard.

The Local Government Board require map No. 2 to be prepared on a 25-inch scale showing the area of the scheme, all existing buildings, and buildings in course of erection, existing and proposed roads, existing sewers and other services, ways to be diverted or stopped up, areas contemplated for open spaces or special purposes; and in private schemes, proposed lines of sewers and other services. An estimate also has to be prepared of the cost of the scheme. In 1910, a deputation of the National Advisory Town Planning Committee met Mr. Dickinson, the Comptroller of the Housing and Town Planning Department of the Local Government Board, and pointed out that in many ways this amounted to the preparation of the scheme, and was premature. Mr. Dickinson in reply explained :—

"That the Local Government Board desired to assist Local Authorities in every possible way in the preparation of Town Planning schemes, but they considered that they were entitled to have from Local Authorities at the outset the whole of the facts and information which were in their possession relevant to the tentative proposals which the Local Authorities had under consideration,

as well as a general indication of the outlines of the proposals. Amongst other things this would have the advantage of placing the Board in a better position to render assistance.

"The Board in effect required Local Authorities when applying for permission to prepare schemes to send with their applications outlines of their tentative proposals in so far as these had been put into shape. Attention was drawn to the Board's circular letter of May 3rd, 1910, in regard to this matter.

"With regard to the question of estimates, the Comptroller stated that the Board fully recognised that it would not be practicable in all cases for a Local Authority at this preliminary stage of the proceedings to furnish accurate estimates of the cost of carrying a Town Planning scheme into effect, especially with regard to compensation. The Board considered that the Act contemplated that some estimates of the cost of a scheme (and not merely the cost of preparing a scheme) should be prepared at this stage, and they were also of opinion that a Local Authority would desire to have for their own information, before embarking upon the preparation of a scheme, some general estimate of the cost likely to be incurred by the Authority and imposed upon the rate-payers, and it was this estimate—so far as the Local Authority could arrive at it—which the Local Government Board would require.

"The Comptroller further pointed out that under the terms of Article X (*a*) the estimated cost was to be stated 'as nearly as may be practicable.'

"With reference to the question of showing the lines and widths of the principal roads, the Comptroller pointed out that in a great many cases the necessity for or desirability of certain new links of communication would be an important, if not the chief factor in the inception of a scheme, and would often have a material bearing on the precise area which should be included in the scheme; and in those cases, and also in some others, the desirability

of linking up certain points would determine, within certain limits, the lines of the roads.

"In such cases—and in other cases where a Local Authority had, before making application for permission to prepare a scheme, given consideration to the desirability of constructing main thoroughfares—the Board would desire to have the tentative proposals of the Local Authority shown on map No. 2.

"The showing of these proposals on map No. 2 was solely for the purpose of communicating to the Local Government Board the preliminary ideas of the Local Authority and did not commit the Local Authority in any way to the scheme of roads thus outlined. Map No. 2 was not one of those required by the regulations to be formally deposited for public inspection, though Article XXXII (*b*) was applicable to it.

"The Board would, moreover, not in any event insist on roads being shown as definitely fixed, and would accept dotted lines on map No. 2, or even an indication that it was proposed to construct a road between two definite points without showing the actual line of the road.

"The Board simply wished to know what projects the Local Authority might already have in contemplation as probable or desirable. If it was contemplated that the scheme would not provide for the making of roads of the character referred to it would not be necessary to show any such roads on the map No. 2."

It is recognised that it is impossible to do more than lay down the lines of the main roads when applying for leave to prepare a scheme, and that such matters as sites for open spaces, factory areas, and the diversion or stopping up of footpaths and existing roads cannot be shown without prejudicing landowners at a later stage.

Without these facts being in the possession of the Local Authority it is almost impossible to prepare estimates which have any value.

After leave to prepare the scheme is given, the land is bound and the real work of preparing the scheme begins. The first work of the scheme is done in the Surveyor's office.

In addition to the particulars shown on map No. 2 a careful survey of the land must be made, and all new roads must be carefully laid out, as well as all widenings and diversions of existing roads, and all roads and footpaths which are to be stopped up. These are determined very largely by existing conditions and the natural contours of the land.

The next step is to allocate sites for the various purposes. The existence of railways, canals, and harbours will indicate areas likely to be developed for industrial purposes. Sites of natural beauty or land of a precipitous nature are readily indicative as those which should be preserved for open spaces. The land bordering streams or low-lying land is unsuitable for building purposes, and generally forms good playing-fields and river walks.

The next stage is one of negotiation with the landowners to secure their co-operation with reference to any private sites for these roads, and in many cases the gift of land for open spaces and the general lines of agreement with regard to the provision of such things as allotments and small holdings.

The next and perhaps one of the most important functions of a Town Plan is the scheduling of zones in which the number of houses to the acre is limited. The various aspects of this question, as well as a detailed discussion on road construction, are treated elsewhere.

The drafting of the scheme, therefore, will include all these matters, including a detailed description of the roads to be made, and those to be closed or diverted;

the duties of the council in laying out new roads, as well as some description of the construction anticipated; the type of roads which private landowners may make generally, including relaxation of existing by-laws and consequent saving of expense; regulations as to the use of manufacturing areas, with certain discretionary powers given to the Corporation; a description of the land to be set aside for open spaces, cemeteries, school sites, allotments and small holdings; a description of the various housing zones, together with the method of computing the number of houses to the acre to be allowed; power for adjustment of boundaries between neighbouring landowners, and control over height and character of buildings, and advertisements; the various clauses necessary to the administration of the scheme; clauses dealing with the question of compensation and betterment, stipulating the time within which both must be made; and finally the clauses giving the power of appeal to those affected in case of grievance.

Having finally decided on all the details of the scheme, it is necessary to prepare a detailed estimate showing the costs. These costs will include the costs entailed by road widenings, provision of open spaces and allotments, legal charges, and a provision for compensation. On the other side must be shown probable income from contributions of landowners and betterments.

The Procedure Regulations themselves were issued by the Local Government Board on May 3rd, 1910, and amended on February 11th, 1914. The amended Procedure Regulations are fewer in number than the original ones, and in some ways less cumbersome in practice. Many of the difficulties, however, cannot be removed without an alteration to the Act itself. The only matters not dealt with in the regulations issued are those con-

nected with " the carrying out of the scheme " and " the enforcing the provisions of a scheme." The Board are not in a position to issue regulations on these matters at present, and are waiting for experience to guide them. In a covering letter of May 3rd, 1910, the Board stated that the regulations were drawn up so as to be of general application; extending on the one hand to schemes which relate to small areas, or contain proposals of a simple character and affecting few interests; and on the other hand to schemes which may deal with extensive areas and affect numerous ownerships and other interests, and involve serious expense. The Local Government Board may, however, dispense with or modify these regulations in special cases (Article XXIV). When a private scheme is promoted by any or all the owners, the same formalities have to be gone through.

The first point of importance is that four weeks have to elapse after the first intimation to the public before the land can become " bound." This gives an opportunity for an obstructive owner to plan or erect buildings, or do other things which may hinder the carrying out of a scheme, unless with compensation.

The next point of importance is that a meeting of all those interested is held, with the Mayor in the chair. As there is no scheme before the meeting it can only consider the area to be planned, and the owners can ask to be excluded. Many owners say they cannot agree to come in unless they know what the scheme is to be. As this cannot be explained, this meeting leads to a great deal of friction, and in fact at a recent meeting in Birmingham the following resolution was passed :—

" That this meeting strongly condemns the procedure laid down by the Local Government Board which requires a meeting of owners to be held to consider a Town

Planning scheme before such a scheme has been prepared, and strongly urges that the procedure be altered so as to allow the Local Authority to prepare all details of a proposed scheme and submit them to the landowners interested at a conference or conferences before the first enquiry of the Local Government Board."

As a consequence, the new regulations provide, as an alternative to the meeting, private conferences between the Local Authority and owners.

After the four weeks have elapsed a resolution is again submitted to the Council to apply to the Local Government Board for leave to prepare a scheme. At this point the land becomes " bound." Accompanying this resolution is map No. 2, which may be the same as map No. 1 with the addition of certain information which the Board require, the roads it is proposed to make, and an estimate of the cost of the scheme. Now it is very difficult to either show the roads or frame an estimate before the scheme has been discussed with the landowners and others interested; so the Local Government Board waive the actual showing of roads, and only require an indication, such as a dotted line, of where roads will have to run. The estimate prepared on these lines is not worth the paper it is written on, but an estimate is required by Schedule V of the Act.

Another difficulty of the regulations is the serving of six (sometimes reduced to four) personal notices on all interested. This entails a complete book of reference being made, and in the case of North Yardley this has cost some £350, and may be out of date before the scheme is completed. The suggestion has been made that these notices might be reduced to two—one, that the scheme has been prepared, and giving the date by which objections must be sent in; and the other, that the scheme

has been approved with the consequences set out in the proviso in Section 54 (4) of the Act. It is suggested that these notices be made (*a*) by service upon owners and lessees (but not occupiers), and (*b*) by poster. It is further suggested that a book of reference can be made by a precept upon the overseers. They should be able to furnish an up-to-date list, including the freeholders, as these have to be included in the register for voting purposes.

A further expense is the preparation of maps. One map of the Quinton area took four weeks to prepare. This is fairly expensive, but more serious still is that it causes delay. Maps have to be prepared in duplicate: one for the Local Government Board to keep, and one for the Local Authority to keep.

The Local Government Board have made the following concessions in their new regulations, which are very valuable and are set forth in their circular dated February 24th, 1914:—

(1) "The reduction from two months to four weeks of the period required to elapse between the service of notices of intention to prepare a scheme and the making of an application to the Board for authority to prepare the scheme.

(2) "The omission of all requirements as to service of notices on occupiers of lands.

(3) "A variation of the requirement that where land outside the district of the promoting Local Authority is proposed to be included in a scheme, a complete copy of map No. 1, on the scale of 25·344 inches to the mile, shall be supplied to the outside Local Authority. A map on the 6-inch scale is substituted, coupled with a right of the outside Local Authority to ask also for a map on the larger scale confined to the land in their district.

(4) "An alternative to the meeting of owners and other persons interested at the first stage of the procedure is provided for by allowing the Local Authority to make a formal offer to confer with such persons if they so desire.

(5) "It is made clear that map No. 1 may be utilised for the purposes of map No. 2 without the dispensation of the Board, which is at present required. Thus, map No. 1 can be converted into map No. 2 by the addition of certain further particulars indicated in the regulations.

(6) "The requirement that map No. 2 shall show the lines and widths of principal roads that may be contemplated, the proposed open spaces and certain other particulars, is omitted.

(7) "Maps Nos. 3 and 6 required by the present regulations will no longer be required to be supplied by the Local Authority.

(8) "Notice of Authority having been given to prepare a scheme may be given by advertisement only.

(9) "An option is given in regard to the form in which maps Nos. 1 and 2 are to be submitted to the Board."

Passing to more detailed points, it is impossible to say with exactitude what may, or what may not, be included in a scheme. Provisions will have to be inserted and powers obtained so as to make a scheme cover the points specified in the Act. In the East Birmingham scheme, for instance, there is a provision prohibiting, "with certain exceptions, the erecting or fixing any building, hoarding, framework, structure, or device for the purpose wholly or in part of advertising—in such a position or manner as to interfere with the amenity of the area." On the other hand, in the same scheme powers were originally proposed for running and making railway sidings in the factory areas which should connect up

with the Railway Companies' main lines. These were ruled out as *ultra vires* by the legal advisers to the Local Government Board. It will thus be seen that as yet no definite basis has been reached as to what may be put into a scheme. Generally, the wider the powers and the greater the discretion reserved to the Local Authority, the better. That this must be so is obvious, as schemes are made not only for the present, but also for twenty or thirty years hence, and circumstances must be constantly changing. For instance, new industries are continually arising, such as mining, and this must completely change the method of development. Without ample powers and great elasticity it would be impossible to meet the new conditions. In districts, however, where the general lines of development are clearly marked out, and where it is likely the scheme will be complete in a very few years, more definite steps can be taken. Perhaps the Ruislip Scheme will illustrate this. Ruislip is within a few minutes' journey of London, on three lines of railway, and has three stations. Communication is not likely to be improved much further. The district will become residential, and has many obvious natural places of beauty which must be preserved. Under the circumstances it is possible to embody details in the scheme itself, as the following analysis will show. Every acre is planned as to the type of street and character of house which shall be constructed on it: there are thirty-six clauses relating to roads and building lines; there are sixteen clauses relating to buildings, including provisions as to the limitation of houses to the acre, their height and character, protection from fire, and sanitary conveniences. There are also clauses relating to the appropriation of land for special purposes, including sites for two cemeteries, allotments, golf links, store yards, refuse destructor,

public buildings, railway purposes, and for public and private open spaces amounting to 153 acres.

On the whole, every locality will have to make its own provisions to meet its own needs, and the Act is sufficiently elastic to allow of very wide variations in schemes.

CHAPTER IV

ROADS

THE problem of road-making and road maintenance is one of urgent importance at the present time, quite apart from the question of Town Planning. Motor traffic of all kinds is increasing with extraordinary rapidity, and especially the heavier type of delivery van and motor omnibus. Surveyors are confronted with an entirely new set of problems both as to road maintenance and road construction. Roads that were perfectly satisfactory ten years ago are now found to have insufficient foundations, to be dusty, and wholly inadequate for the traffic they have to bear. Town Planning may fulfil a most necessary function by dealing with the question of roads in a manner suitable to modern conditions. We are as yet almost unacquainted with roads 100 ft. or 120 ft. wide, but if traffic continues to increase at its present rate such roads will become an absolute necessity.

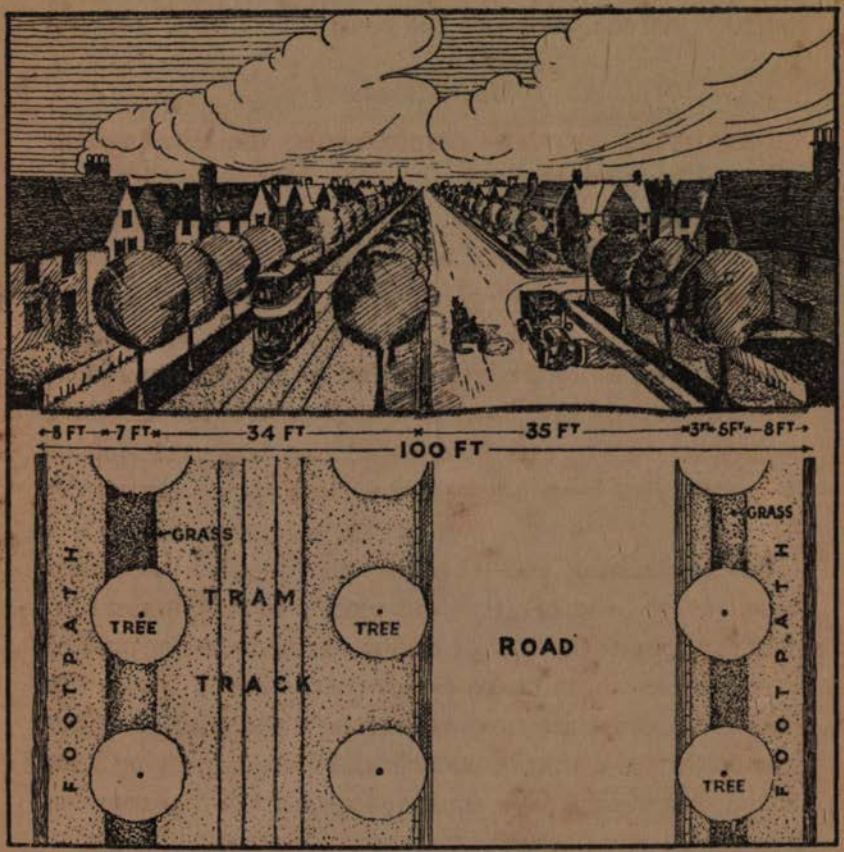
The routes of the roads must be fixed and the widths and constructions must be decided upon. It is obvious that in so doing the probable traffic in the area must be considered. Existing main roads are nearly all radial, extending from the centre to the boundary and connecting up with main national routes leading to neighbouring towns. Good as many of these are, they all require widening and straightening to accommodate the modern fast traffic which is constantly increasing.

Provision must also be made for connecting neighbouring suburbs, and this can best be done by a ring road. If this is of ample width, it also serves the purpose of by-passing through traffic round the city and so relieving some of the congestion at the centre.

Main Roads.

In carrying out these requirements, the Birmingham Schemes have adopted 100 ft. as the maximum width for the arterial and ring roads. Other connecting roads are 80 ft. wide, while others are of more usual width. At first it was proposed to plan the whole of the roads in a Town Planning area, but this was found to be impossible. Landowners having agricultural land are not prepared at short notice to say how they will develop their land twenty or thirty years hence, and so a large measure of discretion has been allowed the Corporation under the scheme.

When planning 100-ft. roads, the question has often arisen as to whether it is advisable to widen existing roads and incur the cost of taking in forecourts or pulling down houses, or to make a new road striking across the fields. To illustrate how expensive a widening may be, a comparative estimate was obtained for improving part of the ring road. The standard width for this route is 100 ft. In one part it passes through a built-up district where the houses are not more than 45 ft. apart. It was found possible by removing a few houses on one side to widen the road at this point to 60 ft. The alternative route, slightly more direct and 100 ft. wide for its whole length, but involving the formation of an entirely new road across fields, was also worked out. The cost of the first scheme was to be £52,000, and of the second £13,000, or about a quarter the cost, giving at the same time a



SECTION OF 100′ ROAD AS PROVIDED FOR IN THE HARBORNE AND QUINTON SCHEME.

better route 100 ft. wide and also developing new building frontage.

The Road Board are inclined to look favourably upon ring roads as forming parts of national routes providing through communication. They are contributing £20,000 to those shown in the two Birmingham Schemes, on the understanding that the "ring" will be completed in future schemes, and on having been shown that this is reasonably feasible.

It is possible, with wide roads of this character, to leave a separate track for tramways. These separate tracks have many advantages. The first cost is very much less, a saving approximately of £3000 per mile of track. The line resting on sleepers is much more elastic and smooth running, which lengthens the life not only of the car but of the track, as well as being much more comfortable to travel over, and less noisy and dusty. The trams, having an unobstructed route, can travel more quickly from point to point, and being generally alongside a footpath the passengers are saved the necessity of crossing the road, with all its attendant risks and disadvantages. The reason that separate tramway tracks have not been provided before is that towns have not looked far enough ahead, and have delayed taking trams out until the road is so built-in that a separate track cannot be provided.

A stretch of road some two or three miles in length is now being laid out on these lines. The Bristol road is one of the widest outlets Birmingham possesses and leads to the Lickey Hills, a large natural park which is a popular summer resort. Where this road passes through the land of the Bournville Village Trust, the owners have given a strip wide enough to accommodate a separate tramway track, at the same time preserving a belt of

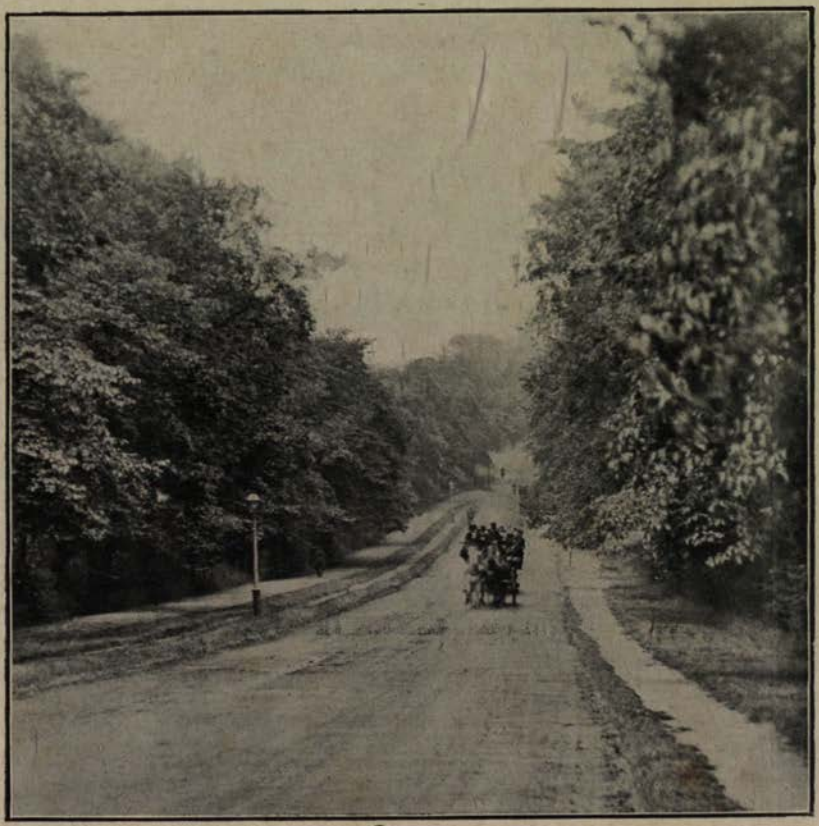
trees which will protect the houses from the noise and dust of the road. As far as possible houses will be built facing side roads, and the frontage to the main road will be developed as little as possible.

Some difficulty was found in arriving at the best road section for entirely new roads. The alternatives were whether the track should be down the centre, down the side, or a line on each side of the road. The objections to the centre, which is in many ways the best position, are that every passenger has to cross the road, frequently at some risk, when entering or alighting, and that the cost of sewering and channelling two side roads has to be incurred. On the other hand, placing the tramway track on one side enables passengers living on that side to approach the tram direct from the path, and one wide road 35 ft. wide for all the other traffic can be provided. In both cases the poles and overhead wires can be concealed by trees. Where, however, the track is on each side, passengers have still to cross the road on the outward or return journey, and carts cannot draw up to the kerb. Perhaps the greatest objection to the separate track in any position except the centre is the fact that carts and carriages cannot draw up close to the footpath. Except in the case of shops this is not of such vital importance as it would seem at first sight to be, as houses in any case will be built well back from 100-ft. roads, which will always be noisy and dusty owing to the volume of traffic. The extra distance is at most ten or a dozen yards. (See illustration page 63).

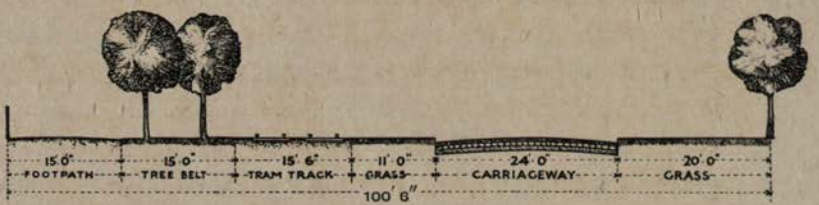
The existing by-laws demand that the roadway shall be laid out as footpaths or carriage-way, but in all these new roads powers are taken to lay part of them down with grass and plant them with trees.

The provision of grass margins is one of the benefits

of the Scheme, which perhaps has not yet been appreciated in all its bearings. That they are pleasant to the eye, and form a relief from the hot, dusty surface of an ordinary road is obvious to anyone, but there are also economic advantages which must not be overlooked. At the present time roads are often made wider than is necessary for the traffic in order to comply with the by-laws. When a road is too wide for the traffic, the very fact that it is not used often causes expense in upkeep, the surface becoming loose with disuse, or even, in extreme cases, overgrown with weeds at the sides. Grass margins provide the necessary width of road at a minimum of expense in upkeep, it being generally not necessary to scythe them more than twice a year, and they are always available for widenings. In addition they remove the objections so often made against the planting of trees. Many surveyors object to trees overhanging a road owing to the fact that the shade retards evaporation, tends to keep the road moist, and therefore deteriorates the surface. This objection is removed when the trees are planted on the grass space. Frontagers often object to trees on the ground that they shade their gardens or darken their houses. With the wide roads and depth of forecourt demanded by Town Planning schemes these objections are removed. In addition to forming a cool shade, residents on well-planted roads assert that trees help to deaden the noise of the traffic, and make it possible to have the windows open in summer when houses in roads without trees have to keep them shut on account of the dust. Undoubtedly if trees are not properly placed they present difficulties in the way of lighting the road, but where trees have grown sufficiently high, proper lopping would allow light from the lamps to penetrate in both directions.



BRISTOL ROAD, BIRMINGHAM, TO BE WIDENED TO 100′ WITH A SEPARATE TRAMWAY TRACK.



SECTION OF BRISTOL ROAD

Grass margins, however, if not properly formed, suffer from the defect of forming a cool and level alternative to the footpath or a convenient playing space for children, both of which soon wear the grass away. In some towns this has been overcome by heaping up the grass in the centre, forming the banks from the soil excavated from the bed of the carriage-way when the road is made, In others a low fence is provided between the footpaths and the grass. In any case the margins should not be less than 6 ft. wide, or they are bound to suffer. This is very apparent at Hampstead, where they are only two or three feet wide, and on many of the roads they have almost disappeared in consequence. An additional safeguard is to place low shrubs, such as barberry, at the corners and by the crossing and access-ways.

Where widenings of existing roads are shown, in many cases the existing road bed will serve for years, and no actual re-construction will be necessary. It is, however, essential that the land for widenings should be scheduled, as if a road is once built-up the cost of widening will be prohibitive. It is wiser to reserve the site, even if no actual alterations are estimated for in the scheme, so that improvements can be made when the traffic demands it, or so that trams can be run cheaply on a separate track. The community will be amply repaid for its foresight.

The Tramways Committee of the Manchester Corporation issued a report on January 29th of last year, on the question of extending the tramways, and the report says :—

"The chief difficulty . . . lies in the bad lay-out of the city streets. The Corporation has for many years

spent large sums of money in endeavouring to remedy this state of things. . . .

"The principal street improvements carried out in the central area since the year 1838, covering as they do so long a period as seventy-four years, cannot be held to be very extensive, yet the cost of such improvements was £2,365,669, and it would be safe to assume that if the same improvements had to be carried out to-day the cost would be at least double that figure."

Secondary Roads.

Other road problems are practically confined to estate development. Here a large amount of discretion has been allowed the Corporation. Having provided wide main roads for the heavy through traffic of a district it becomes possible to relax the requirements of purely estate roads.

It is obvious that the most advantageous way of laying out estates will be to have a few good through streets giving access between Corporation main roads or on to adjoining estates, and to lay out each side of them with these narrower streets. "Cul-de-sacs" with dumb-bell ends give the greatest amount of frontage for the least cost, but they are not convenient from the point of view of the residents, nor are they satisfactory from the point of view of police supervision. In any case, where "cul-de-sac" roads are made, a footpath should be provided from the closed end leading into another street. But a much more satisfactory plan of development will be found to be in the form of Squares and Crescents.

In laying out estates it is advisable to plan the roads so that they do not form through routes for traffic. If they do, then much more traffic will use them, and the landowner or town will be put to continual expense in keeping them in order, as from their narrowness and

BOURNVILLE LANE RAISED FOOTPATH, SHOWING PRESERVATION OF TREES.

light construction they are not designed for continuous and heavy traffic. Such traffic, too, will interfere with the comfort of the residents.

The Act gives power to close or divert existing highways and footpaths, but when this is contemplated an alternative route will have to be shown in the scheme. In the Quinton area unfortunately one or two footpaths are left in without an alternative road being shown, so that these can only be closed by the old and cumbersome method of appeal to Quarter Sessions. These alternative roads, then, will also have to be shown in the scheme, but as they are not through roads they may be made on a reduced section.

These concessions as to diversion and stopping up roads and footpaths, and the formation of inexpensive "owners' roads" are perhaps among the most valuable things that a Town Planning scheme can offer to the landowner and speculative builder.

The "owners' roads" are shown on Sheet B. (p. 182), and it will be noticed that while the actual macadam is only 18 ft., or in some cases only 8 ft., the distance between the houses varies from a minimum of 72 ft. to a maximum demanded of 82 ft. If at any time new circumstances arise and traffic develops, the Corporation can at small cost widen the road without having any obstructive buildings with which to contend. Naturally the smallest section is to be used for ten or a dozen houses only.

A very important provision in the Scheme is the power to fix building lines, and in the existing road no house may be built nearer than 36 ft. from the centre of such road, nor may the Corporation demand it to be set back more than 41 ft. from the centre of the road.

In arranging for the cost of road-making, the Scheme provides that the Corporation shall make all roads

shown in the Scheme, but that the landowner shall contribute at the rate of £3 10s. per yard frontage when his land ceases to be rated for agricultural purposes. When a landowner enters into an agreement and gives the land for the site of the road, a reduction on these figures is often agreed to and the value of the land given taken into account. The value of this to the landowner is great as he gets the road made for him free until he actually uses the frontage, which saves him having a large amount of capital lying idle. This has been generally recognised, and little difficulty has been encountered with landowners on this account.

The saving in cost of the narrower roads is such that this concession should only be given where a limitation of houses is stipulated. The difference in cost between these roads and an average by-law road amounts to something between 20 and 30 per cent.

Another very important clause in the Scheme is Clause 7 (*b*), in which all the streets in the area, constructed otherwise than by the Corporation, shall be constructed in conformity with the provisions of this Scheme, of such materials, and such widths not exceeding 60 ft., except by agreement, on such sites and generally in such manner as shall be required by the Corporation. For the first time the city is now able to control the direction in which new roads shall be laid down, and this is not only of importance from the point of view of the general public, but also from the point of view of neighbouring estates, the Corporation being able to arrange for proper access from one estate to another, and that no one landowner shall be able to block out any other.

The Corporation has power under the Scheme, whenever any plan for a new street within the area is submitted to them for approval, to require any owner or owners of any

OXHILL ROAD, HANDSWORTH, SHOWING PRESERVATION OF TREES.

estate or lands within the areas, the development of which will be affected by the consideration of such street—to furnish to the Corporation at the expense of such owner or owners, and within a reasonable time to be specified in such notice, plans and particulars showing generally a scheme for the development or laying out of such estate or lands. When the ideas or schemes of two adjoining landowners do not coincide, it is to be hoped that an amicable arrangement may be made. When a road is so arranged that the land is cut up awkwardly, the Corporation has taken powers to rectify the boundaries of land so affected. If an adjoining landowner does not submit plans for development, it may become exceedingly difficult for him to adjust his roads to those already passed by the Corporation for the area, and he may in consequence suffer some loss of road frontage, or have awkward pieces of land left upon his hands. It is clearly to the advantage of all concerned to agree upon a general scheme of development beforehand.

CHAPTER V

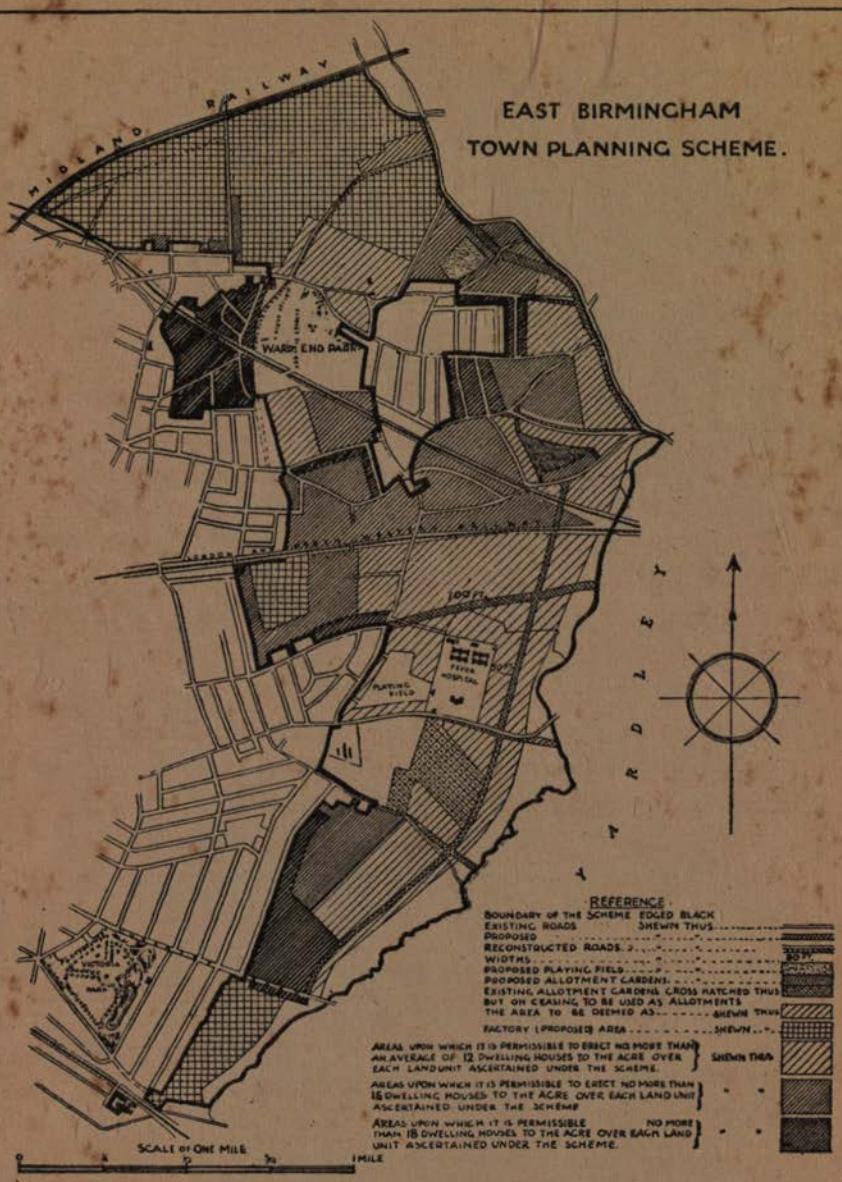
ALLOCATION OF SITES

HAVING settled the lines of the main roads, the next duty is to settle for what purposes the various parts of the area are best adapted. The importance of this selection cannot be overestimated. Every Town Plan must deal with the district as a whole, and must be based upon a most careful survey of all the conditions existing therein.

The first question to decide is: Is the land more suitable for a purely residential area, or ought provision to be made for factories?

In the Edgbaston, Harborne, and Quinton Scheme, the Birmingham Corporation scheduled no factory areas, believing the site to be best adapted for purely residential purposes; but in the industrial district of East Birmingham it has been deemed advisable to reserve factory sites.

Factory Sites.—Assuming that the district included in a Town Planning scheme is of an industrial character, then the Local Authority has a good many questions to decide. The old method of allowing factories to be planted anywhere in towns is wasteful, both to the manufacturer and for the town in general. When it is remembered what this means, both with regard to the wear and tear of the streets and the great congestion of

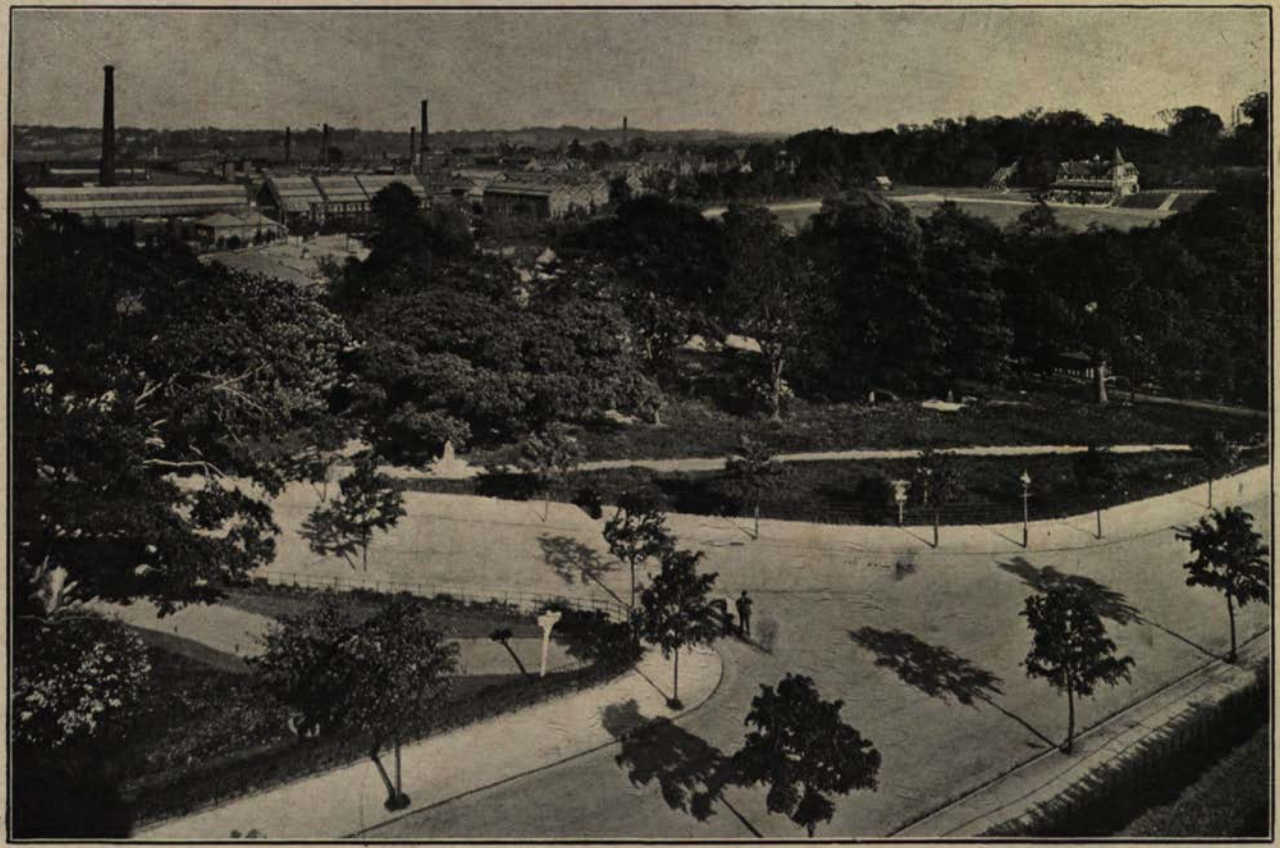

EAST BIRMINGHAM
TOWN PLANNING SCHEME.
MIDLAND RAILWAY
WARD END PARK
100 FT.
PLAYING FIELD
ARDLEY
REFERENCE.
Boundary of the Scheme edged Black
Existing Roads shewn thus
Proposed "
Reconstructed Roads. "
Widths "
Proposed Playing Field "
Proposed Allotment Gardens "
Existing Allotment Gardens cross hatched thus
but on ceasing to be used as Allotments
the area to be deemed as shewn thus
Factory (Proposed) Area shewn thus
Areas upon which it is permissible to erect no more than an average of 12 Dwelling Houses to the acre over each land unit ascertained under the Scheme. shewn thus
Areas upon which it is permissible to erect no more than 16 Dwelling Houses to the acre over each land unit ascertained under the Scheme "
Areas upon which it is permissible to erect no more than 18 Dwelling Houses to the acre over each land unit ascertained under the Scheme. "
SCALE OF ONE MILE
0
1 MILE

traffic, it is obvious that, for the general comfort of the city, factories should be confined to their special areas. It is also important that anyone setting out to develop an estate should be assured that the amenities of the district shall be preserved, as otherwise he runs a great risk of having his property depreciated by the intrusion of an undesirable factory. But the more important side of the question is the economic value of having all the factories placed in such positions that the manufacturer may be put to the least expense, and develop his business on sound lines. Land lying alongside of railways, canals, or harbours, especially level land, is best suited for factory sites. These sites also are generally less desirable for residential purposes owing to the presence of these factors. If such sites are scientifically developed, it is possible to provide such advantages as to attract manufacturers, a consideration which is becoming daily a more important side of civic development.

In 1910 a deputation from the Birmingham Corporation visited Germany for the purpose of studying Town Development, and in their report they laid emphasis upon the amount of attention which was paid in German towns to commercial and manufacturing interests. The German municipalities recognise the desirability of stimulating local industries, and they assist manufacturers in many ways. Indeed, towns may be said to vie with each other in offering inducements to manufacturers to come to them, and not the least item in this respect is the means of transit by rail and water. Yet this is done without producing the ugly results which follow our unregulated practice of allowing works and dwellings to develop conjointly. Town Planning provides the city with powers to schedule factory areas,

HARBORNE TENANTS, SHOWING NARROW ROADS AND GRASS MARGINS.

BOURNVILLE TENANTS, SHOWING RECREATION GROUND AT REAR OF HOUSES. (See Plan, page .85)



FACTORY AREA, BOURNVILLE, SHOWING PARK BELT.

and thus to promote the manufacturing and commercial interests. The mere fact of grouping factories together makes it possible to provide a cheap supply of power, water for cooling purposes, high-pressure gas, and even, in some cases, a central steam supply. Again, a cheap system of sidings, parcel distribution and collection may be inaugurated by co-operation with the Railway Companies; canal basins may be made; where there are harbours or navigable rivers Local Authorities generally have a large amount of capital involved, and it is to their interest to lay out adjoining sites in such a way as will best develop the trade around these harbours.

The manufacturer seeking for a site will look out for these very facilities. He will want to obtain his raw material cheaply and quickly, and he will want to distribute it with equal despatch. The amount of wear and tear on the roads will be much reduced, and the manufacturer will save much of his cartage expense.

Another point to be remembered is that if the manufacturing areas can be confined to the north-east side of towns, the prevailing winds will carry the smoke away.

With the advent of motor road-transport it will become necessary to link up the factory areas with the main roads of the district, and specially the ring road, so that much of the heavy traffic may pass round the city instead of through it.

It is of great advantage to separate the factory area from the rest of the town either by placing it behind a sheltering rise, as is done at Letchworth, or by the provision of a park belt.

A park belt round the factory area has a twofold

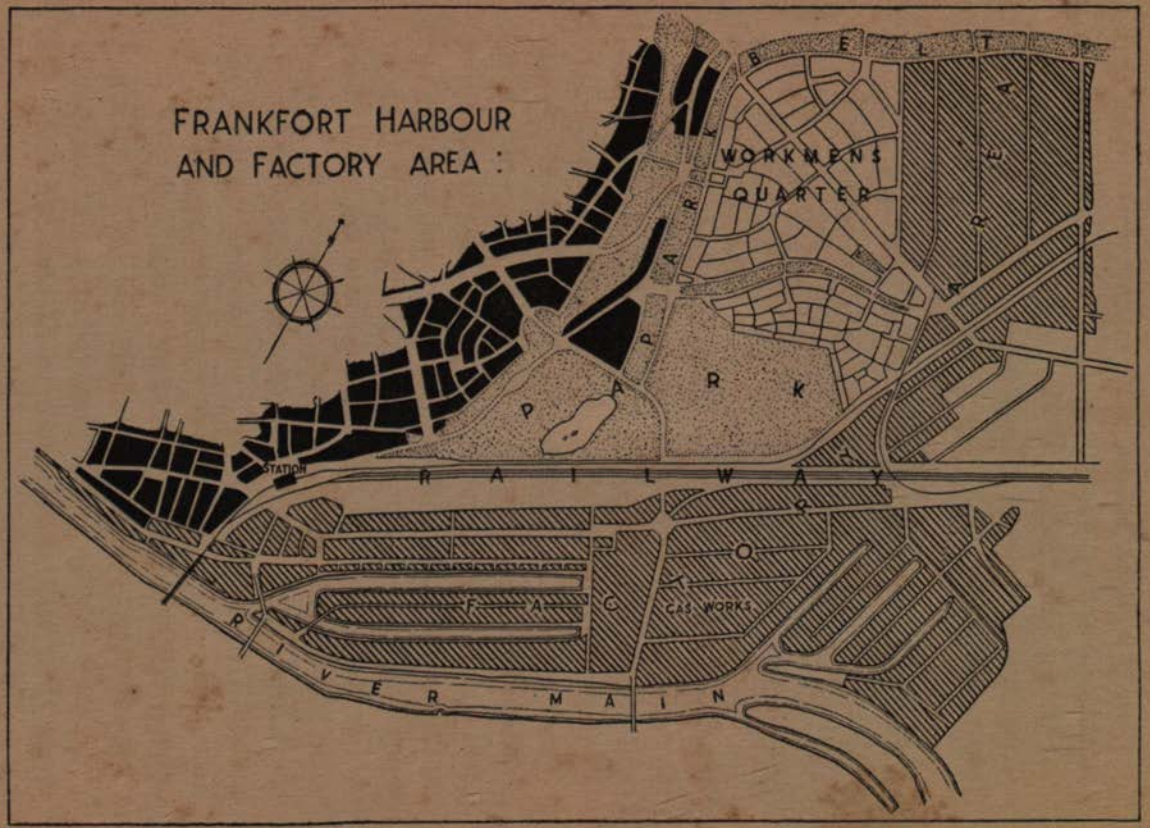
advantage to the town and to the workers—to the town as forming a screen shutting off the noise and smoke from the neighbouring houses, and to the workers so that during their meal times they may get a breath of fresh air before going indoors to the monotony of their work. That this is of great value in increasing the efficiency of the factory is well known where such recreation grounds are available.

The city of Frankfort has planted such an area round its new docks on the Main with ample railway facilities, and the whole is separated from the city by a belt of park land.

In Vienna, the whole of the city is divided into districts for Town Planning purposes, and areas are allocated to factories and works, which are well served by railways and docks. These areas are, as far as possible, situated so that the prevailing winds do not carry the smoke towards the residential portions of the city.

Mannheim similarly owes its great prosperity to its situation on the Rhine and to its municipal enterprise in the construction of docks, harbours, and wharfs. The town has many factory sites for disposal, the price at which these are let or sold to manufacturers being based upon the cost of the land plus its share of the cost of the harbour and other facilities provided by the community. It is found to be good business to meet the manufacturers on favourable terms, owing to the increased assessable value caused by works.

At Frankfort the control of the erection of chimney stacks for factories and steam plant is in the hands of the city, and sanction has to be obtained from the Authorities before the stacks are erected. In this way the positions are controlled. The town is constructing a harbour and factory area at a cost of £3,600,000.


FRANKFORT HARBOUR
AND FACTORY AREA :
BELT
WORKMENS
QUARTER
AREA
PARK
PARK
STATION
RAILWAY
GAS WORKS
RIVER MAIN

The area covers 1150 acres, which is to be allocated as follows:—

	Acres.	
Streets, railways, and embankments	320	
Water basins	90	
		410
"Trade traffic" (coal, etc.)	150	
Industrial sites for wharf industries	130	
Inland factory sites	460	
		740
		1,150

Taking 740 acres as the net area on to which all the charges of the scheme must be placed, the cost of land and development comes out at about £4870 per acre. Up till April 1st, 1911, 90 acres had been sold for £455,000, or at an average price of £5055 per acre, and 55 acres had been let for £13,000 a year, which, capitalised at 25 years' purchase, is equivalent to about £5900 per acre. It will thus be seen that the city, apart from all other benefits of the harbour and factory area, stands to gain a large sum. The official report of the scheme says: "Ninety per cent of the entire area is already purchased. The city was wide awake enough to buy the greater portion of the land sufficiently early, before it could be artificially raised in value by speculators. One must admit that without this precaution the execution of this great project would have become almost an impossibility."

No provision for factory sites has been made in England on this comprehensive scale. Letchworth, however, has set a notable example.

In the report for 1912 the Company state that there are 59 factories at work and that enlargements of many of them are in progress or are contemplated. Encouragement of new industries is part of the scheme of the town,

LETCHWORTH FACTORY AREA.
NORTON
BALDOCK
WILLIAN

and in order to do so they report that: "As soon as practicable, the Company contemplate erecting a factory, in which to let off 'room and power,' preferably for trades accessory to those now on the estate. The nature of the town's manufactures continues to be very varied, and the balance of employment for men and women good, tending to diminish the evils of trade fluctuation in Letchworth, and to promote its steady growth."

In the report for 1913 there were 67 factories and workshops, compared with 59 on November 15th, 1912. The report also adds :—

"A Tenement Factory of 15,000 square feet floor area is being built by the Company on the corner of Works Road and Pixmore Avenue, and there are prospective new tenants in view from other towns for its occupation. Negotiations for the coming of another engineering firm and of one manufacturing furniture are in a very hopeful stage."

The area set aside for factories and railway sidings is about 160 acres, which may be easily extended in an easterly direction so as to cover some 200 acres altogether.

In making provision for factory sites, it is necessary to bear in mind the kind of industry for which the city is catering. For example, bleaching and dyeing works, and indeed most of the kindred industries of the cotton and woollen trades, require a great deal of water for their different processes. The most convenient situation, therefore, would appear to be on the banks of streams, away from the dust of the main road.

One objection to allocating factory sites which has been raised is that the worker cannot live next door to his factory. When it is remembered that the area covered by the factory is between one-tenth and one-twentieth of the area required to house the workers in

BOURNVILLE
STEAM LAUNDRY
CAMP WOOD
NURSERY
FINISHED STORE
FIRCROFT COLLEGE
FOR WOMEN
SCHOOLS
PARK
BOURNVILLE WORKS
RECREATION GROUND
THE BEECHES
RECREATION GROUND
FOOTBALL FIELD
CANAL
STORES
SCALE OF FEET.

houses on Town Planning lines, the factory area is relatively small compared with the adjoining residential area, and with modern facilities for transit no one need live very far away from his work. In this connection it may be found desirable to have several small factory areas, readily accessible from a number of residential areas, rather than having one large factory district.

Open Spaces.—The next problem which will have to be solved is the question of what land shall be set aside for open spaces. All existing open spaces owned by the city should be put into the scheme and scheduled. It will probably be possible to arrange for Commons also to be scheduled by agreement with the Lords of the Manor and the owners, where the Local Authority do not themselves possess rights.

With regard to other open spaces, the preservation of sites of natural beauty or of historical interest should be undertaken, and these will probably form a nucleus of large parks. It is equally important, however, that small open spaces should be well distributed, so that every house is within a reasonable distance of some such space. As a general guide, probably 10 per cent of the land should be so reserved.

During the last ten years America has achieved a development of small parks and playgrounds more remarkable than has taken place in any other country in the world; and the experience of Chicago is of the greatest value and interest when considering the question of open spaces. A report of the City Club at Chicago details the work of the Park Commissioners most thoroughly.

At present in Chicago there are over thirty small parks, thirteen public playgrounds, seventeen small park

playgrounds, and three bathing beaches—in all, sixty-three public neighbourhood centres of rest, beauty, recreation and culture.

"A typical centre includes both outdoor and indoor activities. The outdoor activities comprise as the central feature a liberally planned bathing pool, with sand banks, dressing-rooms, cleansing showers, life-guards, and bathing suits. Collateral to this are an outdoor gymnasium for men, another for women, another for boys, another for girls; running tracks, wading pools, and sand courts for the youngsters; also tennis courts and ball fields—turned into skating rinks in the winter time. The interior features include a thoroughly equipped gymnasium for men, another for women, each having a trained director and being furnished with baths and lockers; a lunch room, reading and library room, one or two small club-rooms for small gatherings, and a large and beautiful assembly hall for neighbourhood meetings, lectures, or pleasure parties. The entire construction is on a liberal plan and is carried out according to high standards. So is the maintenance.

"The bulletin boards containing the assignments show also that the club and assembly rooms, as well as the gymnasium and other features, are well and increasingly used by the people of the neighbourhood. It has been felt by discriminating observers that it would perhaps prove wise to place in general charge of each one of these centres a specially trained person who would wisely direct it and to some extent promote its social activities, such a person, for example, as may now be found at the head of a successful social settlement. In any event it is obvious that these centres afford opportunities which command, as they deserve, enthusiastic use from a growing number of the younger generation of city dwellers.

"The work of choosing park sites was done in a careful and systematic manner. Sealed proposals were received,

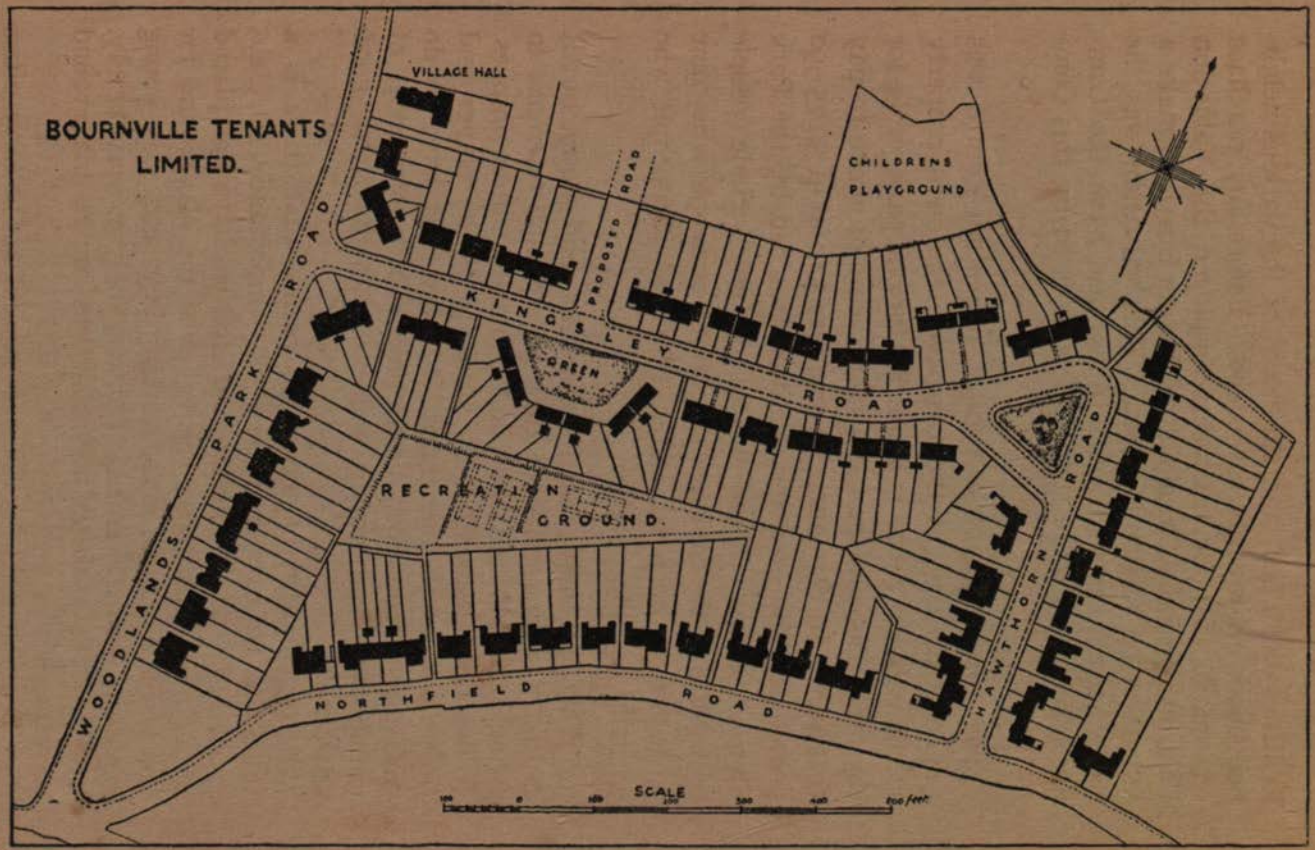
localities examined, and the needs of the various neighbourhoods thoroughly canvassed. Before any purchase was made the Commissioners employed the Valuation Committee of the Chicago Real Estate Board to make a valuation on all land chosen. This valuation was the basis for all negotiations. In no case have the Commissioners paid more than the value fixed by this Committee."

The total cost of a typical recreation centre was £44,000; the cost to the tax-payer who owns property to the value of £2000 is about 8s. for one park, or £4 for the ten parks, and he has twenty years in which to pay that sum. In the course of one year a total of 5,175,590 people actually used the facilities provided by the Park Commissioners. These figures do not include people who skate in the parks, or spectators, or people who come to listen to the band. They represent the people who actually use the facilities.

"This movement had its origin in child study, but it is vastly more significant than its common reference to swings, teeters, and the play of small children implies. It has been recognised by students of the playground that there are 'upper ends' to play that have to do with the unconscious development of adolescence, of young men and young women, that make for good citizenship.

"We are also beginning to realise that there is a tendency to over-emphasise the importance of playgrounds for small children and that we have not placed enough emphasis upon the value of the playground for the larger boys and girls, working boys and girls, young men and young women. Let me analyse, very briefly, some of the theories and practices of the playground movement.

"The argument for the playground in the large cities is that there is no place where children may play; that


BOURNVILLE TENANTS
LIMITED.
VILLAGE HALL
PROPOSED ROAD
CHILDRENS
PLAYGROUND
KINGSLEY
ROAD
GREEN
RECREATION
GROUND.
WOODLANDS PARK ROAD
NORTHFIELD ROAD
HAWTHORN ROAD
SCALE
feet

a public playground will take children from the streets and alleys and give them a better environment and safer place in which to play; that it will relieve parents of care and anxiety concerning the safety of their children. Truck-drivers, street-car men, policemen, and others indirectly involved in the care of children will also be relieved, and juvenile crime and delinquency will be reduced.

"Few children will go more than half a mile to attend a municipal playground, which is a good indication that one should be established in every square mile, at least in the populous districts.

"No small park should be constructed of less than ten acres. Where possible twenty acres give the best results. The small playground of three or four acres is a playground but never a park, and does not afford the opportunity of doing the work rightly. The cost of maintenance is too great. It costs from £5000 to £6000 to operate a small park properly. It costs but a trifle more to operate a twenty-acre park than a four-acre park, and in the latter case the facilities and the opportunities of doing the work rightly are greatly hampered."

Of course the foregoing exemplifies the provision of open spaces on a very far-reaching scale, but it will serve to show how far English cities have fallen short of their ordinary duty in providing open spaces. Town Planning schemes, therefore, are doing something at any rate to remedy their shortcomings, and are endeavouring to provide sufficient open spaces in the rapidly growing districts.

Under the Birmingham Schemes, when a plan for estate development is sent in, the total number of houses per acre is specified, and the landowner has the option of dividing the land up into gardens for these houses or reserving any part of his land either as a public open space to be given to the Local Authority, or for providing

open spaces in connection with his own tenants. In the diagram on page 85 a very useful form of open space is shown which has been largely adopted in many Garden City schemes. The advantages of such common recreation grounds are their privacy, the safety with which children can reach them without crossing a street, their nearness to the houses of those using them, and the background which they give to the houses backing on to them. They have all the advantages of a London "square," but with more privacy. This form of open space will provide for the needs of a large number of people, and in Quinton and Harborne, only the larger parks and playing fields have been reserved in the scheme for this reason.

Open spaces, therefore, divide themselves roughly into three classes :—

A. Large parks, probably near the outskirts of the city where land is cheap ; or along river valleys where land is low-lying and unsuitable for building, and at the same time has the beauty which the presence of water affords.

B. Playing fields which may often be arranged in conjunction with the larger parks or river valleys, but in any case should be on level ground and not laid out like ornamental parks.

C. Small local playgrounds, either public or private.

The Garden City ideal reserves a belt of open space around the outskirts of cities. In Vienna a wide belt of this nature is reserved, extending over the hills, and providing points of view which extend towards the Tyrol. In Berlin similar reservations are proposed, but English municipalities have yet to appreciate the full value of these wide park belts from the health and recreative point of view.

Allotments and Small Holdings.—Under certain circumstances the Local Authority is bound to provide allotments and small holdings, and if there is a local demand it is advisable that these should be put into a Town Planning scheme. Naturally only certain land is suitable for this purpose, and due regard will have to be had as to the quality of the soil, the aspect of the land set aside, and the proximity of the site to means of transit and markets.

The Town Planning Committee were asked to deal with a piece of land 101·75 acres in extent at Birches Green, belonging to the Gas Committee, but which had to be abandoned by them under the terms of the Greater Birmingham Provisional Order. The plan on which the estate is proposed to be developed provides 82 acres of building land for 865 houses, 5·25 acres of open space, and 15·75 acres for factories and sites for a school and a church. The open space is arranged so as to involve no loss of road frontage, and at the same time adjoins the school so that part of it may be used as a playing field for the school-children. At the back of the houses spaces are reserved for allotments in such a way that if it is found desirable to increase the gardens attached to the houses, the allotments may be easily divided up. On the lower side of the estate adjoining the canal, factory sites are reserved. The estate is very accessible in several directions—the ring road (Bromford Lane) passing along one boundary; a main road to the east forming the boundary on the north side, and a new road, along which powers to make a tramway are being obtained, running on the southern side parallel with the canal.

Residential Areas.—Having provided for all these other requirements, the remainder of the land will be

allocated for residential sites, and according to the character of the land, its proximity to manufacturing areas, railway stations, or parks, it will be possible to specify the number of houses and the type of house to be built in each part of the residential area. The limitation of the number of houses to the acre is one of the most important provisions of the Act, and a special chapter is devoted to the subject. In allocating sites it will be necessary to bear in mind the necessity of shopping centres, public buildings, etc.

The success of the Town Planning scheme will depend upon the wisdom and the skill with which this allocation is carried out. Of course every scheme will have its own characteristics which will determine the lay-out of the land. The presence of a river may make it possible to arrange a footpath by its side so that the public may enjoy a river walk, or the river may be more important in connection with a factory area.

In the Edgbaston, Harborne, and Quinton Scheme, the guiding consideration in the minds of the Town Planning Committee was that it should be laid out as a residential area, and everything else made subservient to this main object.

On the other hand, the predominating feature of the East Birmingham area was its industrial character, and this necessarily determined the general character of the scheme.

The allocation of the sites, therefore, is seen to be a question of great importance, the proper handling of which is of the greatest moment to all classes of the community, and demanding a thorough knowledge of local conditions, together with the business capacity required in developing a large estate. Town Planning is, therefore, estate management on a large scale,

with a proper regard to the needs and possibilities of all classes of the community, and is not only the work of the surveyor and the architect, but also of the business man, the estate agent, and of the man of imagination.

CHAPTER VI

THE RESIDENTIAL AREAS AND THE LIMITATION OF THE NUMBER OF HOUSES TO THE ACRE

WHEN allocating sites in Town Planning, although the other requirements are dealt with first, the residential areas are the most important consideration. The questions to be decided are:

Means of access;
The limitation of houses to the acre;
The relaxation of building and other by-laws;
The settling of sites for special buildings;
Shopping centres;
Churches;
Schools, etc.

If it is possible to foresee to any extent the development of the district, an anticipation of these requirements will save a great deal of money in years to come.

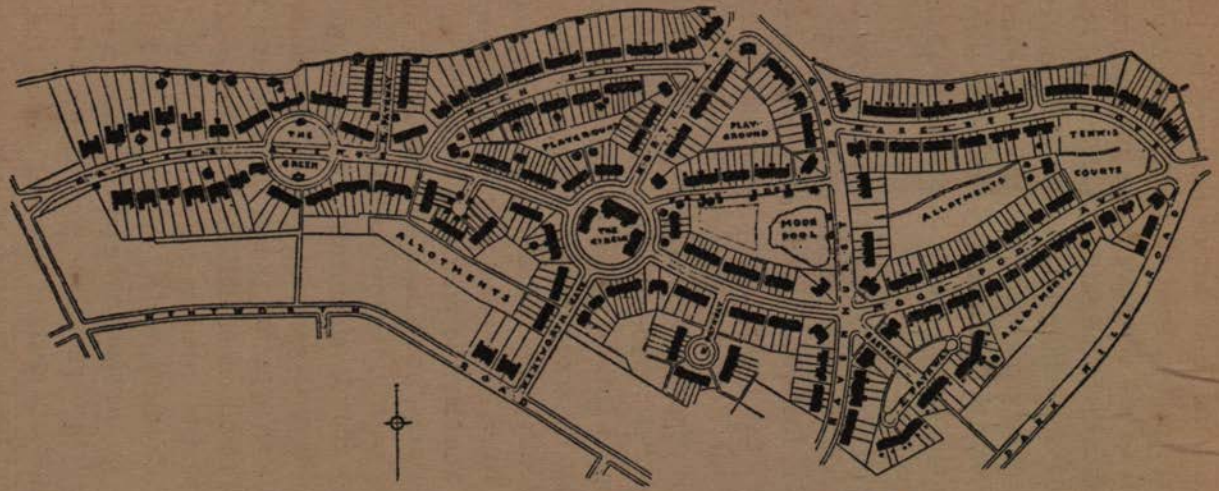
The limitation of the number of houses to the acre is perhaps the most important provision in any scheme, and naturally it is the provision upon which public attention has been most strongly concentrated, to the exclusion perhaps of other considerations, such as the concessions made to landowners in the construction of their roads, and the facilities for manufacturers in the provision of suitably situated factory sites.

That the standards of limitation vary very widely is apparent from the standards already adopted in different

places. Not the least service rendered by the Garden City movement has been that it has been possible by experiment to test the advantages and the drawbacks of certain standards of limitation. Letchworth, Hampstead, Harborne, Port Sunlight, Earswick, Hull, and Bournville have all been of great value, and this tribute may be paid to them: that the standards of limitation there adopted have been very largely used as the basis for all subsequent Town Planning schemes.

Garden City schemes had one great advantage—they controlled all the land within their borders, and were able to treat the area as a whole without a multitude of dissentient and sometimes discordant voices. The passing of the Housing and Town Planning Act in 1909 marked a distinct advance and created a new situation. Local Authorities under the provisions of the Act are, however, faced with a very different set of conditions. They are not the landowners, and therefore they have not the same control over the land as the promoters of these pioneer schemes; they are considerably hampered by having to consider the present development of the land within their area, and above all with a large number of landowners with different and frequently conflicting ideas as to the development of their estates. Local Authorities have to exercise skill and ingenuity in harmonising these opposing points of view, and the final scheme is a compromise founded on the suggestions sent in by the various interests concerned. While the landowner, the allotment holder, the builder, and the manufacturer are on the spot at the outset, and can make their claims heard throughout the formation of the scheme, the great interests of those who will inhabit the area are voiceless, and the Corporation is their sole trustee.

Four years have now elapsed since the Act came into



PLAN OF HARBORNE TENANTS ESTATE, BIRMINGHAM.

force, and two schemes of the Birmingham Corporation —the Edgbaston, Harborne, and Quinton, and the East Birmingham Scheme—have become law. Other schemes are almost at the end of their tortuous passage, and it is interesting to notice how the standards of limitation have varied.

In the Quinton Scheme an average of twelve houses to the gross acre has been fixed, and a maximum of twenty upon any one acre; in the East Birmingham Scheme, three housing zones have been marked off—twelve houses to the acre being allowed in the first, fifteen in the second, and eighteen in the third; Sheffield proposes to permit twelve to twenty-four; and Sutton Coldfield has five standards in its draft scheme, ranging from as low as four to as high as twenty-five to the acre.

It is clear from these varying standards that there must be certain factors, the presence or absence of which determines in a large measure the standard to be adopted in any particular case. If it were not so, the fixing of a standard, instead of being the most complicated and thorny matter in Town Planning, would be the simplest and most straightforward. The very fact that housing zones are marked out with a different standard for each, manifestly proves how difficult it would be to lay down any rigid rule.

Two methods of determining the number of houses to the acre have been adopted. One, in which the net acre is considered as the basis, that is to say, only the actual size of the building plot and the relationship of the size of the houses to the size of the building plot is considered. The other, in which the gross acre is taken as the basis, which includes half the area of the existing roads fronting it and any land to be dedicated as open spaces. The former method has been adopted at Letchworth, and by

the Bournville Village Trust Deed, in which it says: "It is the desire of the Founder that so far as possible such tenements may occupy not more than *one-fourth part* of the sites in which they are respectively erected, the remaining portions to be used as gardens or open spaces in connection with such tenements." At Bournville, if it were not for the elasticity implied in the words "so far as possible," it would have been impossible to develop the corner sites on the lines laid down.

Already at Letchworth the difficulty is realised, and provisions are suggested in which if "empty land" exists, a certain percentage of additional houses may be allowed.

Much greater elasticity is possible when the gross acre is considered, as the owner can build his houses with small gardens, and provide allotments or playgrounds, and plenty of space at road junctions; or he can divide up the whole of his land into roads and building plots, giving his houses large gardens. Many men do not want a garden but still like to live in open surroundings; while others not only like a large garden but will also take an allotment as well. For these reasons in all recent schemes the gross acre is taken as the basis of calculation. The Birmingham Town Planning Committee arrived at this decision after much consideration and consultation with the Local Government Board.

Clause 17 (*b*) of the East Birmingham Town Planning Scheme provides:—

"In reckoning the number of dwelling-houses to be erected to an acre, all roads and private open spaces constructed or to be constructed and set apart or to be set apart by the owner of the lands in question, and half of the width of the highways repairable by the inhabitants at large upon which the said lands abut, shall be included

in the measurement of the acre, but no account shall be taken of public open spaces acquired, otherwise than by gift subsequent to the making of this scheme, or leased by the Corporation, or of the sites of the shops and other buildings mentioned in and approved under sub-clause (*c*) (iii) of this clause; and subject to the provisions of this clause an acre shall be measured so as to include such lands as the Corporation in each case having regard to all the circumstances determined by the Order to be made under sub-clause (*c*) (iii) of this clause."

"Dwelling-houses" in this Clause means houses designed for occupation by not more than one family. When an estate plan has been passed, the Corporation shall by order sanction the number of houses to be erected on the land unit, and such order shall be binding on the owner and every successive owner, and no dwelling-houses when erected shall be used or adapted for purposes other than those sanctioned. It has been suggested that under the scheme large houses might be built with a view to sub-letting to two or three families, but the above provisions are a sufficient safeguard against such possibility. The calculation as to the number of houses which shall be built is arrived at by fixing an average and a maximum. The Corporation ask for a plan to be submitted of the land which it is proposed to develop, and the adjoining land if such is within the area of the scheme, whether it belongs to the same owner or not. If the adjoining land, or any of it, belongs to the same owner, he is asked to furnish a plan showing the land he owns, both immediately adjoining or elsewhere in the area. The other land-owners are also asked to send in a plan of the land they own which adjoins. An area either containing a part of, the whole of, or more than, the land proposed to be developed is then marked off by the Corporation and is

designated a land unit. Upon this area or land unit an average number of houses only may be built—in the case of the Edgbaston, Harborne, and Quinton Scheme twelve to the gross acre. An acre, including as it does half the adjoining highways, all the roads to be made, or any private open spaces to be reserved, or already given, or to be given to the public, is called a gross acre. A net acre, on the other hand, is the actual building land left after the above-mentioned highways, roads, etc., and open spaces have been provided for. If any land is given to the public, either as roads or open spaces, this is included, and of course means that the rest of the land may be more closely developed so as to bring the number of houses up to the average, but in no case on any one net acre may the density exceed twenty.

If, for example, the area measures ten acres, and two acres are given to the Local Authority, and the limitation is twelve houses to the gross acre, the landowner is still allowed to build 120 houses on the remaining eight acres, but if the Local Authority has to buy two acres for open spaces, only 96 houses will be allowed.

It will be noted that gifts of land are thus an advantage to the owner, in that he is allowed to have the area given to the public taken into account in fixing the number of houses to be erected on the remaining portion of the land.

Many considerations must be weighed before any standard of limitation is fixed.

The character and condition of the site is clearly a very important factor. The natural condition of the land, its situation and its general contour, determine its suitability for housing purposes. But whatever the purpose for which the land is to be used, it is obvious that its natural situation and condition must largely affect its wise and economical use.

Natural conditions differ widely even in the same locality. Anyone who has laid out an estate will know that undulating land is more expensive to develop than a level site. The cost of road-making and sewering is greater; the cost of hauling and foundations is also increased, and consequently the cost of building. At the same time such land lends itself to more artistic lay-out, and, on the other hand, is more difficult to cut up into regular shaped plots for smaller property. There can be no question, then, that such land is more suitable for a larger class of property. The more level land can be cut up into regular plots by roads in any direction; the cost of haulage and building is less, and, other things being equal, it should lend itself more readily for workmen's dwellings. A consideration such as the foregoing, which calls for high-lying land to be set aside for better-class houses, also renders the likelihood of invasion by factories very slight, for the factory needs easy access to both rail and canal.

Further, riverside land may have natural attractions which most eminently fit it to be an open space, and even if it is not so scheduled it may command a high price for residential purposes, and in an area such as this the number of houses to the acre will be fixed fairly low.

Of course other factors may be comprehended under this consideration as to the character and condition of the site, such as the dryness of the soil, or the general aspect of the site, which are extremely important in considering the question of housing. The direction of the prevailing winds too must be considered when scheduling the factory areas and the housing zones, so as to neutralise as much as possible the effect of the smoke from the factories.

These general points may be illustrated by the Birmingham schemes. The Quinton Scheme area on the

western side of Birmingham lies along the south-eastern slope of the watershed of England, Quinton itself being over 700 feet above sea-level. At present there is little railway or canal access, and the area has therefore been planned as a residential suburb. It is in close proximity to the manufacturing districts of Oldbury and Smethwick on the north, the well-to-do suburb of Edgbaston on the east dividing it from the centre of the city. The standard of limitation fixed there was twelve houses to the acre.

The East Birmingham Scheme, however, where the land is generally more level, and intersected by four lines of railway, borders on large manufacturing areas on the north, and densely populated districts on the west. Three factory sites have therefore been reserved contiguous to the railway and the canal, and three housing zones have been fixed where the numbers are respectively eighteen, fifteen, and twelve houses to the acre.

Apart from the natural conditions of the site there is another factor to be borne in mind, that is, the influence and effect of neighbouring sites. In a wisely-planned scheme transitions from a densely-populated district to an area where there are only three or four houses to the acre should be avoided. It is much more economical to progress by stages and to graduate the limitations, and it will be found more generally convenient to group the workmen's dwellings near the factory areas. Indeed, one of the greatest advantages of Town Planning is that, once the character of the district has been determined, a landowner can develop his property with confidence on the lines so determined, without fear of invasion by slums or noxious factories. Quite naturally, the most eligible sites and the houses with the fewest number to the acre would be contiguous to parks, woods, moorland, golf

links, rivers, or ornamental water. For example, the houses adjoining Sutton Park, in the Sutton Coldfield Scheme, have been limited to four houses to the acre.

In this connection it may be noted that the proposals in the East Birmingham Scheme were upset on application to the Local Government Board on this particular point. The standard of limitation was fixed at twelve, owing to the fact that the area was contiguous to a park, but the Local Government Board altered that standard from twelve to fifteen, arguing that as the park was already there more houses might be erected near to it.

The character of the site is also largely conditioned by the means of access, or the probable means of access. Is there a railway or a canal passing through the area? What is the condition of the roads? Are they wide enough to take a system of tramways, or is their surface good enough for a service of motor buses? For where the district possesses means of cheap transit such as tramways or motor buses, undoubtedly smaller houses will be demanded. It is very largely in the power of the Local Authority what access shall be provided, and according to the nature of the site provision will be made for trams or motor buses.

As a rule, districts only accessible by rail, and where there is an absence of good access by roads, are often very "select," and develop into villa property; while under a Town Planning scheme, the advent of good roads, with the introduction of trams or motor buses, immediately opens up the district for all purposes, to the benefit of the general community. The necessary safeguards to existing property must, however, be provided in such a scheme. Stechford on the east side of Birmingham

provides such an example. It has been accessible by rail since the opening of the London & Birmingham Railway in 1837, but road access has been most indirect. Situated only 3½ miles from the centre of the city it has grown only very slowly, but with a good class of property. Now for the first time there will be good road access, and the district, being near an industrial centre, should develop rapidly. Steps will be taken, however, to safeguard the existing village, and so, while conferring a benefit in one direction, existing interests are protected in another.

A further consideration will be the present state of development in the area. If roads have already been begun, the size of plots and building depths have thereby been determined, and it will clearly be impossible to treat the area on the lines applicable to an entirely undeveloped area. Builders may have bought plots of land, and made developments with a view to erecting certain types of houses, and if this be so it would necessarily be a factor of great importance in deciding on the ultimate development of the estate. If the roads already laid down are also sewered and channelled and kerbed, it will be impossible to proceed to limit the number of houses to the acre without direct consideration of these existing roads. When the East Birmingham Scheme was prepared, certain areas were found to be partially developed in this way. It was obviously impossible to make a strict limitation of twelve houses to the acre when the land had already been cut up with the intention of building twenty to twenty-four on it. A compromise was made by which in the more developed parts of the land a limitation of eighteen houses to the acre was fixed, and where the land was not so developed fifteen, and on the undeveloped portions twelve.

80343

Another factor of great importance is the allowance to be made for the general price of land. The Local Government Board will have to certify that the scheme, in their opinion, is reasonable, and this will include the limitation of houses. It is obvious that when land is of agricultural value, the effect is comparatively slight, and it can be shown that the spreading of building development is an actual advantage to the owner. This arises from the fact that agricultural land often represents capital which is locked up waiting for building development. For a given increase of population this capital will be more quickly brought into use when the houses are spread about than when they are built closely together. Hence it often pays a large landowner to have town planning rather than land sweating.

Where the population is crowded on to the land, as in Berlin, the rent inevitably rises, and has there reached a most exorbitant figure, the reasons given being that for a given increase in population a relatively small amount of land is required, and the landlords recoup themselves by charging exorbitant prices. Where buildings containing several flats are the general rule, the cost of land is a comparatively small item compared with the cost of building, and therefore the builder can afford to pay a higher price without appreciably affecting the price of flats.

If this is true, it is probable also that the converse is true: that, with a given increase in population, where houses are limited to twelve to the gross acre instead of eighteen or twenty, as is now commonly the case, the landlord will develop between 50 and 60 per cent more of his land, and he will therefore get his return in a much shorter time.

Mr. Unwin has worked out the effect of limitation of houses on land in the neighbourhood of London, and

finds that with a given increase in population the landlord transfers, at a much greater rate, land from mere agricultural value, which gives practically no return, to developed land yielding a good rate of interest. If we take the ordinary price charged for building-land near London as £300 per acre, the difference is so marked that he can afford to reduce his price to £175 per acre, and still obtain the same ultimate return on the whole. This, of course, is provided he has a large amount of undeveloped land to deal with, and that the number of houses put up is not abnormal. He has, in consequence, worked out the following table :—

	C	F	C. 1
Number of houses per net acre	15·6	37·8	15·6
Number of houses per gross acre	12·4	25	12·4
Total number of houses	248	500	248
Total area of roads in acres	4·103	6·798	4·103
Total net area of building land after deducting roads, in acres	15·897	13·202	15·897
Net average area of plot per house in yards	310	127	310
Total cost of roads	£9008	£14,991	£9008
Total cost of land	£6000	£6000	£3500
Total cost of land and roads	£15,008	£20,991	£12,508
Cost of land and roads per gross acre	£750 8s.	£1,049 11s.	£625 8s.
Ditto per net acre of building land	£944 1s.	£1590	£786 16s.
Cost of land and roads per house	£60 10s. 6d.	£41 19s. 6d.	£50 8s. 8d.
Equivalent ground rent per annum	£2 8s. 6d.	£1 13s. 6d.	£2 os. 4d.
Ditto per week	11¼d.	7¾d.	9¼d.
Price of plots per net yard	3s. 10¾d.	6s. 7¼d.	3s. 3d.

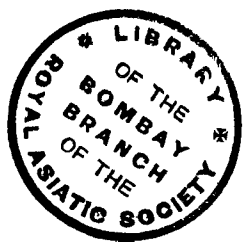
In each case a plot of 20 acres is taken and the roads are assumed to cost, when 50 feet wide, £7 10s. per lineal yard, when 36 feet wide, £5 10s. In columns C and F the land is taken at £300 per acre before development. In column C. 1 the effect is shown of reducing the cost of land before development to £175 per acre, on the ground that *double the amount* of land would be required.

It will thus be seen that if this factor is also taken into account, the weekly rent for a plot 310 yards in area is only 1½d. more than a plot of 127 yards in area; or that the rent of houses 12·5 to the acre is only a fraction more than that of 25 to the acre. Mr. Unwin allows rather a larger amount of land for roads than has been allowed in the other Tables, and the cost of road-making is rather greater in London than in Birmingham, but otherwise the essential features are the same.

At the present time the price gradient is extremely steep, but with this open development of the town, together with properly organised transit facilities, the gradient will tend to become much more equable. Land which is ripe for building purposes will go down somewhat in price, and land situated farther out, which is practically only of agricultural value, will be made available for development. The general result will be cheaper land for housing purposes, because the present method of holding up land on the outskirts of an area, until it fetches what is known as building value, will be broken down, and the builders and the public generally will have access to greater areas of land, and the power of the land speculators will be weakened.

A much vexed question here arises as to how the city should develop its suburbs. Is the municipality justified in running trams ahead of building development, or is it unsound to do so? Undoubtedly the motor bus has

simplified the answer to this question, as, if the municipality have powers, a motor-bus service will test the needs of a district sufficiently to give data upon which to find out if a tram-line is likely to pay. This, however, raises another question: as to whether a tram or bus service should be run into a district not safeguarded by a Town Planning scheme. If there is sufficient time, obviously it is safer to wait until a scheme is prepared, but the matter is complicated when there is an outlying village which badly needs communication. There they have a right to be supplied, and the town must plan the adjacent area, as soon as possible. With care, the danger may be avoided of gratuitously putting large sums into the landlords' pockets without adequate safeguards; on the other hand, if landlords will fall in with a Town Planning scheme, the prospect of opening up their land by better means of access is a powerful inducement to be able to hold out on the part of the Local Authority.


LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

Estate Development.

The statement given below shows the effect of different numbers of houses per acre on the size of building plots and cost of development. The land taken has an area of 37·9 acres. Price of land before development taken at £150 per acre. For Charts see pages 10 and 11.

	Site as developed with 20·9 houses to gross acre. Average frontage per house 13 ft. 6 in. Road 42 ft. wide, at £5 per yard.	Developed with 10·5 houses to gross acre. Frontage same as Column I. Roads 42 ft. wide, at £5 per yard.	Developed on Garden City lines, with 10·5 houses to gross acre. Average frontage per house 23 ft. Roads 42 ft. wide at £5 per yard. Roads 20 ft. wide at £3 per yard.
Number of houses per net acre	25·7	11·6	11·6
Number of houses per gross acre	20·9	10·5	10·5
Total number of houses	764	382	382
Total area of roads in acres	6·7	3·6	4·5
Total net area of building land after deducting roads and sites for public buildings—in acres	29·7	32·8	31·9
Net average area of plot per house in yards	188	244·5	353·4
Net area of land for public buildings—in acres	1·5	1·5	1·5
Net area of open spaces—in acres	0	13·5	4
Total cost of roads	£11,725	£6,250	£8,074
" " land	£5,685	£5,685	£5,685
" " " and roads	£17,410	£11,935	£13,759
Cost of land and roads per gross acre	£459 7 0	£314 18 1	£363 0 9
Cost of land and roads per net acre (after deducting roads, open spaces, and land for public buildings)	£586 3 10	£363 17 5	£411 18 10
Cost of land and roads per house	£22 15 9	£31 4 10	£36 0 4
Equivalent ground rent per annum	£0 18 2¾	£1 4 11¾	£1 8 9¾
Equivalent ground rent per week	£0 0 4¼	£0 0 5¾	£0 0 6½
Price of plot per yard net	£0 2 5	£0 2 6½	£0 2 0½

The effect of limitation can only be demonstrated clearly by taking some actual examples. Land round Birmingham does not perhaps command quite such a high price as in other towns, but the figures given are quite reasonable, and large areas of land within five miles of the centre of the city and near trams or railways have been bought for much less. From the above table it will be observed that the difference between houses at 20·9 to the gross acre and 10·5 to the gross acre only means an addition of 1½d. a week upon the ground rent where the average frontage per house is 13 ft. 6 ins., and only an addition of 2¼d. where the average frontage is increased to 23 ft. In the case of the limitation of 10·5 houses, four acres are given in open spaces, and there are no open spaces where the houses are 20·9.

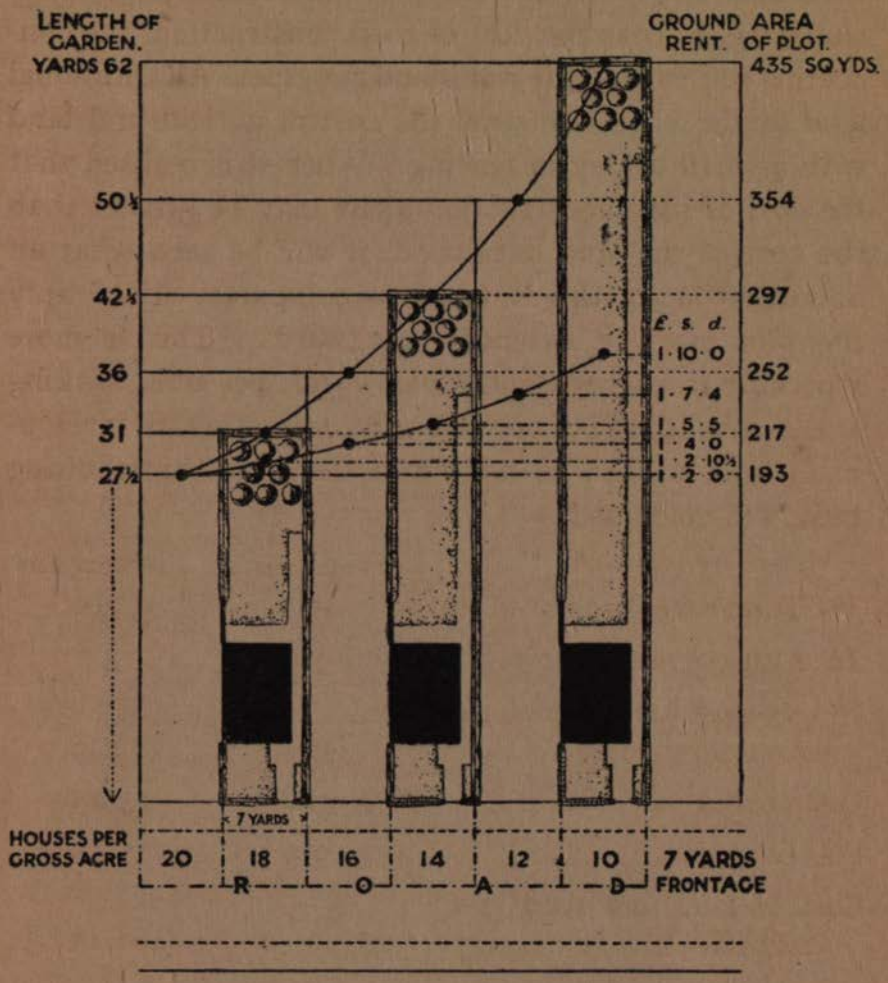
The next Chart, dealing with the size of plot and comparative ground rents, will be found in this connection to be of interest. The Chart assumes that the land is valued at £150 an acre, that it is a straight piece of road which is being developed, and that 7 yds. frontage is given to each plot, and the Chart is worked out on the basis of limiting the houses to the acre to 20, 18, 16, 14, 12, and 10 :—

Number of houses to the acre.	Area of plot.	Ground rent per annum.
20	193 sq. yards	£1 2 0
18	217 ,, ,,	£1 2 10½
16	253 ,, ,,	£1 4 0
14	297 ,, ,,	£1 5 5
12	354 ,, ,,	£1 7 4
10	435 ,, ,,	£1 10 0

The Chart shows quite clearly that with a limitation of houses to the acre the ground rent does not rise in any-

thing like the same proportion as the area of the plot, for whilst the area is more than doubled the ground rent only rises about one-third. The reason really is quite simple. All the expense of developing a plot is on the road and the part of the plot immediately adjacent which has to bear the cost of road construction, the connecting sewers, and the water and gas pipes. All additional land at the back is merely the cost of agricultural land with a small outlay in fencing. When it is realised that the cost of road construction alone may be greater than the cost of the land developed, it will be seen what an important factor this is, and how comparatively cheaply the plot may be extended backwards. This is more especially true where land is below £300 per acre. Taking a 20-acre plot at £150 per acre and contrasting its development with 12 and 18 houses to the acre, the following table will hold good :—

	12 to the acre.	18 to the acre.
Total number of houses	240	360
Total area of road in acres ..	2·3	3·7
Net average area of plot per house—in yards	357	219
Cost of land	£3,000	£3,000
Cost of roads	£3,950	£6,215 5 0
Cost of land and roads per gross acre	£347 10 0	£460 15 3
Cost of land and roads per house	£28 19 2	£25 11 11
Equivalent ground rent per annum	£1 3 2	£1 0 6
Equivalent ground rent per week	£0 0 5¼	£0 0 4¾
Price of plot per yard, net ..	£0 1 11¾	£0 2 4



SIZE OF PLOTS AND COMPARATIVE GROUND RENTS

It will be seen from this table that for an extra ½d. per week the tenant gets 138 extra yards of garden, or 62 per cent, and there is no working-man in the country who would not regard such a bargain as one which is very advantageous.

It is just then to conclude that the limitation of the number of houses to the acre will have an effect upon rents, but this effect will be comparatively slight, confining itself to the ground rent, and the advantages will be considerable.

In discussing the question of limiting the number of houses to the acre the provision of gardens and allotments is clearly important, and in the next chapter it will be shown within what limits they may be provided so as to be both economical and convenient for a working-man to cultivate in his spare time.

Quite recently an objection has been raised to the limitation of the number of houses from the point of view of the reduction in rateable value; this would appear to be quite fallacious. If it could be substantiated it would be an argument of great weight, for the municipality must of necessity pay great regard to the question of its rateable value—but can it be substantiated? The cardinal fact to be remembered is that there need not necessarily be any increase in the length of roads for the same population, whether housed at 10 houses to the acre or 20 houses to the acre, provided that the average frontage per house is the same in both cases; and under Town Planning it is not proposed that the frontage should be greatly increased. Therefore the objection raised that the greater length of road will have to be kept up, or that the expense of the delivery of letters or tradesmen's parcels will be increased, is seen to be invalid. It is true that the rateable value per acre would

be less, but the rateable value of 100 houses would be perhaps slightly more, and it is this last figure to which attention must be directed. It must be remembered, too, that some of the expenses of the locality are in direct proportion to the road frontage to each house—lighting, paving, sewering, and policing are in this class. Other expenses bear some relation to the number of houses, as is the case with the expenditure upon public health, upon education and libraries. In any case the acre is not a valid standard to take. Now if these expenses are taken in order, lighting and paving will not increase, as they are proportioned to the road mileage; and if the cost of sewering is slightly increased because of the slightly longer connections, this extra cost will not fall upon the municipality but will fall upon the owners.

Experience in this country and in America has definitely shown that policing will cost less, as the cost of policing is always heavy where the people are densely crowded together. Crime and overcrowding are inseparable evils.

The question of limitation, therefore, carries with it many problems involving a nice adjustment between the claims of the landlord for a fair return on his capital and the claims of the community for the means of a healthy and decent house to live in within its means. So important, however, were the claims of the latter deemed to be by Parliament, that a reasonable limitation was to carry with it no compensation to the landlord. This may at first sight seem a little unfair, but it is fairly certain that in the long run landowners will find that it will be a safeguard in the hands of good and progressive members of their class against what has been termed the "land sweater." In years to come people will no more

think of returning to the old overcrowded conditions than they would now of building the type of house built before 1870, prior to building by-laws being introduced.

CHAPTER VII

GARDENS AND ALLOTMENTS

THE terms "Garden City" and "Garden Suburb," now in general use, are employed to convey what is a comparatively new departure in Housing and Town Development schemes—viz. the provision of houses with their own gardens attached.

Before the decade 1870–80 there were practically no building by-laws, and difficult problems of slum clearance and town congestion generally have resulted. Since the great Public Health Act of 1875, conditions have greatly changed, and the health of the population has improved enormously. Towns are now more healthy places to live in, and the death-rate has decreased to a most marked extent. At the same time it has been felt that this in itself is insufficient. Under by-laws enforced by this and succeeding Acts, long rows of monotonous houses have sprung up in long monotonous streets, and towns, though healthy, have become dull places to live in, for in the majority of cases Nature has been completely dethroned A reaction has now set in, and whilst desiring to preserve all that is valuable in the Public Health Regulations, more elasticity is now demanded in local by-laws, and a yearning for more natural conditions has manifested itself. To some extent this has been supplied by allotments, at first provided privately, and afterwards by Local Authorities under powers granted by the Small Holdings Act of 1892, and later by the Small Holdings

and Allotments Act of 1908. Under these Acts at the end of 1912, Local Authorities in England and Wales held 31,089 acres for allotments, which were let to 117,562 individual tenants and 21 associations. During 1912 15,875 individuals and 10 associations applied for allotments covering an area of 3811 acres. This demonstrates a large and increasing demand for gardens. The Garden City movement seeks to supply these in connection with the houses themselves, with very obvious advantages to the tenants. This is now made possible on a large scale in schemes of town development under the Town Planning Act, by virtue of the provisions which give power to limit the number of houses to the acre.

The number of people who actually enjoy the possession of a garden seems to be increasing, and the method commonly adopted to satisfy this want is to provide allotments. Allotments are often at a little distance away, and a definite effort has to be made to visit them. The natural place for a garden is round the house itself, and this permits of odd moments being usefully employed therein which might otherwise be wasted. It forms a safe place for the children to play in, while the wife can go and gather her garden produce as she requires it. Added to this is the indefinable charm of the sight and scent of flowers always at hand.

The limitation of houses to the acre ensures that the majority of houses shall have adequate gardens attached to them. In addition, allotments can be provided at the rear, and it is no uncommon thing to find that a man will rent an allotment in addition to his own garden. This limitation of houses to the acre, therefore, involves some investigation into the requirements of those who want gardens attached. This does not give an absolute indication as to the numbers which should be allowed to the

acre, as the provision of open spaces for other purposes is also involved in the problem, but the size of garden required is a very important factor.

An enquiry recently conducted showed that people's requirements varied considerably, partly owing to soil and climate, but principally owing to the varying enthusiasm of different householders. From a study of returns furnished by some 67 individuals in various parts of Birmingham and from Societies representing 300 tenants at Letchworth, it is evident that the best provision takes the form of a moderate-sized garden, and some allotment near at hand for those who require more. Very few require more than one-eighth of an acre. Of the Birmingham replies 31 per cent think one-eighth of an acre (605 square yards) is suitable; 35 per cent prefer 400 to 560 square yards; and 30 per cent prefer less than 300 square yards. An average of these figures shows that the demand is for the provision of about 420 square yards; and this can be met with a limitation of 10 houses to the gross acre. It appears that many men would be willing to pay 3d. a week for an allotment if they had no garden attached to their house.

Mr. F. J. Osborn of the Howard Cottage Society, Ltd., Letchworth, gives his opinion that "a plot 400 square yards appears to be about the best size. Tenants who *care for a garden* do cultivate the whole of it and never complain of it being too large. A certain proportion of the plots are smaller, to provide for the tenants who do not care for gardens."

The report from three Cottage Societies at Letchworth, representing 300 cottages, is as follows: "A fixed amount of 400 yards is too large; it is best to vary it from 200 yards to 600. The best way is to make all gardens about 250 yards, and have additional pieces to

let to those who want more, or to be used as a drying ground, or for fowls. This is easily done if a path runs along parallel to the houses, between the compulsory area and the optional, but all must be fenced in. It is much more trouble to get tenants to take an interest in a garden with heavy clay sub-soil than light soil."

Recently the Birmingham Town Planning Committee passed plans for laying out an estate of 84 acres, which was originally purchased for gasworks by the Gas Committee, but which had to be given up for this purpose. In laying out this estate, 10 houses to the gross acre were agreed upon, and the land behind was divided up into gardens, and an oblong patch at the rear of the gardens for allotments. It was felt that as the desire for gardening grew, it would in this way be possible to throw the allotment space into the gardens at some future date.

There is one difficulty which arises from attaching a garden to a house, rather than renting it as a separate allotment, which seems to have escaped attention. The extra two or three pence a week added to the ground rent often brings the house just above the compounding limit, and the effect of this is unfair both to the landlord and the tenant. For instance, in parts of Birmingham where a differential rate exists, the compounding limit is about 6s. 6d. The provision of an adequate garden may add perhaps 1½d. a week to the rent. This brings the assessment up above the limit, and either the landlord has to add more than 1½d. a week on to the rent to get his return, and the tenant does not get equivalent value; or the landlord has to lose the difference. When the allotment is separate this does not operate, but the action of the compounding limit seems to act unfairly against the provision of gardens.

A great deal of care must be exercised in laying out

the gardens; they will give a greater yield if the aspect and the position of the paths are properly considered. For instance, fruit trees should not be dotted about but should be collected in a group. The path is much better running on the southern side close under the hedge where there is least sun. This will give a good wide bed the full width of the garden, which will enable the gardener to plant his vegetables in rows running from north to south Much care has been given to working this out at Bournville, and it is the opinion of the Bournville Gardeners' Association, after long experience, that this method is the best.

As a general rule the gardens at Bournville are divided into three sections. The front gardens are used almost entirely for flowers; the part at the rear of the house is used as a vegetable garden; while the extreme end is planted with fruit trees. This arrangement does not prevent light and air getting at the vegetable garden, and at the same time the trees form a screen and thus make the gardens much more private and prevent the feeling that the inhabitants in one row of houses are looking directly into the back windows of the other.

The cost of laying out a garden of 400 square yards works out at £10, which is added on to the capital value of the house and included in the rent. The turf for the front gardens is obtained from the sites of the houses just about to be erected. The gardens are divided by privet and thorn hedges. Some years ago the ermine moth attacked the thorn hedges and did considerable damage, so that hedges are now broken up into sections of different kinds of quick, and thus stay the spread of any special pest. It is sometimes objected that hedges take the nourishment out of the ground, but this can be very largely minimised by trenching along the hedge

each year. The quick-set hedges seem to be much appreciated, and no one would now like to see the ground cut up by walls or wooden fences.

The gardens are all dug and the hedges and fruit trees planted before the tenant comes into the house. Certain creepers are also planted against the house. That this has been the right course to take is shown by the fact that there are practically no complaints of uncultivated gardens. This is in striking contrast to the ordinary suburb development, where as a general rule the builder takes no thought for the garden; and there is no more disheartening thing than to set out to cultivate a garden from which all the turf and top soil has been removed, and where all the old brickbats and bits of lath and plaster have been buried.

One of the replies to an enquiry recently made relating to gardens is as follows:—"The top soil was sold and removed from the gardens next to us. *Result*—some poor man tries to cultivate the clay that is left and of course gets disheartened, lets the garden run to weeds, seeds of which blow over our garden, and almost make us tired of gardening although our land is good, and all the soil intact and in good condition."

In the Birmingham Town Planning Schemes a clause is inserted to give the Corporation power to come in and tidy up a neglected garden. This is very necessary, as a neglected garden not only depreciates a district but may become an actual nuisance by disseminating the seeds of dandelions and other weeds.

The yield from gardens under spade culture is a very important economic fact which cannot be overlooked. Very few enquiries have been made in this direction, but it is well known that market gardens give a very much higher yield than any other form of land cultivation.

Every garden, therefore, may be looked upon as bringing land from grazing or arable land to spade culture. That this means increased wealth cannot be gainsaid. The only figures that seem to be available as to the yield of gardens are those obtained by the Bournville Village Trust.

Four sets of tests, covering 25 gardens varying in size from 294 square yards to 650 square yards, and averaging 424 square yards, have been made to ascertain the value of the garden produce. The occupations of the men varied greatly, and some of them were very much occupied in public work. It thus shows what may be done in the leisure time of an ordinary working-man. These men, moreover, entered the competition held by the Bournville Gardeners' Association and they may be regarded as being representative. Their occupations were as follows: carpenters, blacksmith, window cleaner, jobbing gardener, rent collector, wood turner, lodge keeper, police constable, engine driver, garden labourer, boiler maker, glass worker, brass worker, foremen in works, printer, workers in post office, brass finisher, and general factory labourers. Nineteen of the men worked locally, and six in Birmingham. The yield varied from £2 17s. 11d. from a garden 514 square yards to £8 0s. 4d. from a garden of 540 square yards, the amount from the smallest garden, 294 square yards, being £4 3s. 9d. It is only fair to say that the garden which yielded the least was that of a man nearly 70 years of age, and the garden which yielded the most belonged to a middle-aged man, who had not touched a garden until about twelve years before. The result shows an average net yield of 2s. per week for each garden throughout the year. This gives a return of £128 16s. 0½d. for the 10,580 square yards represented by the 25 gardens, or at the

rate of £58 18s. 5d. per acre per annum. This includes the yield of apples from six to eight trees. Records under this head have been kept for five years, during which time 270 returns have been made. The total amount of apples grown has been 39,332 lbs., or an average of 145 lbs. per garden per annum. If this is priced at 2d. per lb. it gives an income of 24s. 2d. per annum per garden, a substantial contribution towards the rent, and alone more than covering the increased cost of a garden, without reckoning the yield from vegetables and flowers.

The yield of potatoes has also been remarkable, some gardens yielding 70 lbs. to 80 lbs. in addition to other crops; and in one garden, the whole area of which was 600 square yards, the yield was 112 lbs. from 7 lbs. of seed potatoes. This was on good land but with a north aspect.

Thus the gardens, while providing healthful recreation for the cultivators, yield, as a result, a wholesome fruit and vegetable diet for the households, effecting thereby a very welcome economy in the family budgets. Another point in connection with these gardens is well put by a writer in the *Economic Review*. He says, dealing, it should be noted, with figures differing slightly from the latest returns: "There are 43½ acres under cultivation, and at the ascertained average yield per acre of £59 8s. 8d. per annum, this gives a total of £2585 7s. od. per annum. Under ordinary methods of farming the yield was previously less than £5 per acre per annum; that is, the total yield of the 77 acres which are at present opened out used to be about £385 per annum. Thus, at the present time, the 77 acres produce more than six times the value of their former produce, and in addition, at the same time, house, under ideal conditions, a population of nearly two thousand people." In other words, it has been found that the yield per gross acre is something like

£30 per annum, as against about £5 under ordinary agriculture.

Even a small garden of 300 to 400 square yards will yield a return proportionate to the amount of time put into it. It therefore becomes an extremely valuable reserve for men who have intermittent work, or who are short of employment. It is well recognised that a man who has two occupations is very much stronger economically than the man who has only one. Gardens, therefore, especially if supplemented by a system of allotments, become a factor in the economic development of the city, as well as a means of recreation. Many thousands of hours which are now wasted by men out of employment, or in spare time, which they do not know how to occupy usefully, may be thus spent, not only to their own advantage, but increasing the general wealth of the community as a whole.*

* Since the above was written I have come across the following statement made by Mr. Seebohm Rowntree, which adds further confirmation to what has already been said. In his book, "Unemployment: A Social Study," he states:—

"We have in our possession figures obtained by one of the writers a few years ago, but not hitherto published, which show the actual yields, over a period of three years, of small allotments held by a number of York men.

"These figures show that twenty-four industrial workmen, cultivating allotments of rather less than the fourteenth part of an acre, situated at a considerable distance from their homes, obtained on the average, taking the lowest market rates, produce to the net value of £30 17s. 2d. per year per acre; the gross value was £53 5s. 10d. per acre; the figure given above is arrived at by subtracting from this all out-of-pocket expenses for seeds, manure, etc., but *not* subtracting the sum paid for rent (in this case £7 an acre). Judged by value, one-third of their crop consisted of potatoes, the rest of other ordinary vegetables, such as cauliflowers, cabbages, peas, beans, lettuce, etc., which enter into the dietary of a working-class family. The soil was not especially good, and only two of the men had greenhouses (7 ft. by 8 ft. 6 in. each), and so the conditions were in no way abnormally favourable. It is not, however, suggested that equally fine yields could be obtained if the size of the allotments were greatly increased, for with the increase of area cultivation would no doubt become less intensive; but the figures prove that in England, as in Belgium, a very substantial addition to the family income, and consequently a very substantial insurance against unemployment, might be obtained by an industrial workman cultivating half an acre or an acre of land.

"The less yield is probably due, however, to the fact that the allotments were some little distance from the homes of those working them."

CHAPTER VIII

PUBLIC HEALTH AND SOCIAL CONSIDERATIONS

NO discussion of the advantages of Town Planning would be complete without some reference to the question of Public Health and the social considerations connected therewith. Whatever objections may be raised to other aspects of the matter, nobody is now concerned to deny the value of Town Planning in relation to the health and welfare of the people. The vital statistics of Town-Planned areas have put the matter beyond all controversy, and, other considerations apart, if the case for Town Planning was based only on the question of health and welfare, further argument would be superfluous. But the sole purpose of this chapter is to emphasise again as strongly as possible how much the whole community stands to gain from every provision which, directly or indirectly, makes for health and happiness among its members.

To take one obvious illustration which appeals to the whole nation, because of its serious proportions—the loss to industry consequent upon the ill-health of the workers. That loss cannot be measured financially, but the loss in other directions is no less incapable of assessment.

It is quite true that a great deal of the ill-health will continue, despite all wise precautions, but there can be no question that much is preventable by wise measures of sanitation, among which Town Planning must always take a very high place.

The effects may take a generation or two to show themselves fully, but the result will nevertheless be very well worth the time of waiting.

The vital statistics of Letchworth for 1912, now available, once more confirm the contention above set forth. The following comparative statistics have been compiled from the Registrar-General's annual summary:

Town.	Infantile Mortality Rate per 1,000 Births.	Ordinary Death-rate per 1,000.
Bournville	55·0	4·8
Letchworth	50·6	6·1
Hampstead	62·0	9·8
Bournemouth	70·0	9·9
Lewisham	62·0	10·4
Hammersmith	90·0	13·1
London	101·0	13·6
Hartlepool	104·0	14·5
Stockport	107·0	14·6
Burnley	145·0	14·7
Stepney	105·0	15·2
Bethnal Green	96·0	15·3
Poplar	107·0	16·4
Bermondsey	111·0	16·8
Middlesbro'	125·0	17·2
Shoreditch	123·0	18·1
Liverpool	125·0	18·1
Finsbury	114·0	18·8

The Medical Officer for Health for the district in his annual report says:—

"Numbers of the children coming from large populous towns were anæmic, poor in physique, and large numbers were suffering from adenoid growths and throat affections. This state of things is fast disappearing with the new conditions under which they live."

Whilst these figures may or may not be taken as absolutely correct, the disparity is such as to make the claims of Letchworth unchallengeable. Garden City, it must be remembered, is a busy manufacturing town, containing forty industries, and with a population of over 8000, drawn from the crowded industrial centres.

The extraordinary difference in the Infantile Mortality Rate may largely be ascribed to the fact that the smallest cottages do not number more than 12 to the acre, whereas self-contained working-class dwellings in most industrial districts number thirty, forty, and even fifty to the acre.*

One of the remarkable signs of the times is the great awakening with regard to this matter of public health, and it seems incredible that past generations should have been so indifferent with regard to it.

It is true that the last century saw the problems of the nation change their character from rural to urban conditions, and a series of statutes followed in order to meet the changing conditions, yet nevertheless the true awakening to the intense importance of public health is only coming at the present day. The conditions prevailing in industrial towns a hundred years ago are difficult of credence at the present day, and those conditions, moreover, were not confined to the working-classes, but were common to all grades.

Typhus and smallpox did not differentiate between rich and poor, and a bath-room simply did not exist even among the well-to-do people.

The City of Birmingham, which obtained its first private Act of Parliament for public health matters in 1769, was then a thriving town of some 60,000 or 70,000 inhabitants, and early in the nineteenth century it made

* "Garden Cities and Town Planning." August, 1913.

great strides in the matter by obtaining powers for setting lamps up in the streets, and preventing the thatching of houses. The system of Private Bill legislation lasted until half of the nineteenth century had gone, and the new era was ushered in by a series of statutes, including the Town Improvement Clauses Act of 1874 and the Public Health Act of 1888.

The first compulsory Acts were the Public Health Acts of 1872 and 1875, and from the passing of those Acts dates the awakening which at the present time is so marked a feature of our national and municipal life.

From the beginning of the nineteenth century until its meridian, the population of Birmingham increased at a rapid rate, and in 1851 it had reached a total of 250,000. In this period of rapid growth the question of public health seems to have been almost forgotten.

Mr. F. Tillyard* in a paper before the British Association in 1913 has given a masterly summary of this neglect of sanitation in early times, and speaking of the twenty years between 1851–1871 he says :—

"Everything was sacrificed to cheapness, and cheapness was attained not merely by excluding all conveniences such as the laying on of water, but by restricting the ground space. The new manufacturing districts seem to have added the horror of building three-storied back-to-back houses in courts."

Enough has perhaps been said to show that the question of public health was not always the important question with the general public that it is to-day, and one of the claims of Town Planning to public recognition is the emphasis which it has contrived to throw on the importance of this aspect of the question, and the wide proposals it makes for the further welfare of the people.

* "Town Development in the Nineteenth Century." F. Tillyard.

It may be well at this point to indicate one or two of the modern tendencies which serve to show the increased attention now being paid to the matter. The passing of the Insurance Act was a great step forward in national affairs, and its direct and indirect effects cannot yet be properly estimated. That Act provides that where any excessive sickness in any locality is proved to be due to the negligence of the Local Authority, the Insurance Commissioners may recover the cost of this excessive sickness from that body. Whether that provision will become an instrument of frequent use is not for the moment important, but its significance at the present time cannot be doubted. Parliament recognises most clearly the absolute duty of the Local Authority to safeguard, in so far as it can, the health of the dwellers within its area.

A further interesting point must not be lost sight of. A system of panel doctors under the Act may result in a great advance in the organisation of public health matters. It is clearly to the interests of the panel doctor that his patients should be kept in good health seeing that he is paid a fixed sum whether they are ill or well. It will probably mean that a good proportion of the doctors of the country will be eager to co-operate with the Local Authorities in all the schemes which have for their end the health and well-being of the community.

It is not too much to hope that this co-operation will be exercised in the matter of Town Planning, which clearly can do so much in this direction, and the medical profession will probably be one of the strongest forces supporting the movement towards its general adoption.

Moreover, the general attitude of Local Authorities all

over the country towards measures of public health displays the same attitude of mind. The provision of parks and open spaces by the Parks Committees, the thoroughness and the zeal displayed by members of Public Health Committees, and the wide support that these Committees receive, all emphasise the fact that public health ranks high in the estimation of public bodies.

The Medical Officer of Health for Croydon recently conducted an interesting experiment in the Borough. He divided the population of Croydon into two divisions, the first that part of the population living in houses of six rooms or less, and the second, that part of the population living in houses of more than six rooms. The infantile mortality rate among the inhabitants of the houses of the first division was 121, and in the second division it was 44 per thousand births. This latter figure is lower than that of any large town in England, and proves conclusively that an infantile mortality rate of 50 or under is a possibility. In Birmingham in 1912 it was 111 per thousand births. It only remains, then, on this head to say that in the work for public health carried out by means of multifarious agencies, the agency of the Town Planning authority is one of the utmost importance, ensuring the supply of decent housing conditions, properly-planned factory areas, sufficient open spaces, properly-modelled streets, and all the necessary provisions for a healthy and prosperous city.

This manifestation of zeal for the cause of public health brings into the more striking prominence the facts general to great cities as they exist at the present time. It is not proposed to quote these statistics at any length, because the facts are so well known, but a glance at the accompanying illustrations on pages 132 and 133 will serve

to show the relation between public health and housing. It may be stated generally that where housing conditions are bad there death-rates are high, and where housing conditions are good there death-rates tend to be on a lower scale.

The city of Liverpool has recently carried out some important housing schemes, and has published the information which has been collected with regard to the cost and as to the social and moral effects. Extensive insanitary areas have been cleared and the people previously living in these areas have been re-housed. Open streets have been provided in place of closed courts, open spaces have been provided at the rear of the houses, and a further valuable provision has been made for children's playgrounds. Under these new conditions the death-rate has fallen by more than one-half, and the average annual death-rate from phthisis has fallen from 4 per thousand to 1·9 per thousand. The disappearance of typhus fever is no less noteworthy, yet in 1910 in Liverpool for the first time in its history not one single death from typhus was recorded during the entire year. Similarly in the number of closed courts which have been opened or removed, disease has been removed also, and the infantile mortality rate whilst still considerably higher than it should be yet shows distinct signs of diminution.

Another illustration may not be considered out of place. During the last year or two some interesting measurements have been made in order to ascertain how children living in a Town-Planned area like Bournville compare with children of the same age living in one of the overcrowded districts in St. Bartholomew's ward. Those results were :—

	Age 6 Years.	Age 8 Years.	Age 10 Years.	Age 12 Years.
Weight	*lbs.*	*lbs.*	*lbs.*	*lbs.*
Boys, Bournville.....	45·0	52·9	61·6	71·8
,, St. Bartholomew's Ward	39·0	47·8	56·1	63·2
Girls, Bournville	43·5	50·3	62·1	74·7
,, St. Bartholomew's Ward	39·4	45·6	53·9	65·7
Height	*ins.*	*ins.*	*ins.*	*ins.*
Boys, Bournville	44·1	48·3	51·9	54·8
,, St. Bartholomew's Ward	41·9	46·2	49·6	52·3
Girls, Bournville	44·2	48·6	52·1	56·0
,, St. Bartholomew's Ward	41·7	44·8	48·1	53·1

Enough has been said to show that the methods of housing and city development generally have a close and an important relation to the question of public health.

Apart from the injury to the individual and the local community which preventable disease brings, the financial burden which it also entails is considerable.

Alderman Thompson has some interesting figures with regard to the expenditure upon hospitals, sanatoria, workhouses, infirmaries, fever hospitals, and the like, and whilst it is not contended that this expenditure could be wiped out under better social conditions, it is contended that it might be most materially reduced.

Perhaps the most efficacious provision of the Town Planning scheme in this matter is the limitation of houses to the acre. This clearly means that the population will be spread over a larger area, and that more opportunities will be provided for fresh air and sunlight. The Medical Officer of Health for the city of Birmingham when speaking at the Annual Meeting of the British Medical Association in July, 1910, said :—

" Feeling strongly as I do upon the necessity of distributing the people in towns so as to give them greater

facilities, I look to limiting the number of houses to the acre as one of the most important results of Town Planning. . . .

"The value of open air at all ages is not yet appreciated, except by those of us who have practical experience of the effect of such open air in the cure and prevention of disease. Those of us who are actively engaged in the campaign against tuberculosis realise more than ever the value of open air as distinguished even from air inside well-ventilated rooms. It is, in my opinion, necessary to provide in the future that every town dweller shall have so good an opportunity of being in the open air that many of the diseases which we now associate with towns shall be eradicated or very largely diminished."

This guiding consideration of decent conditions is kept in mind in all the matters pertaining to a Town Planning scheme. Whilst the limitation of the number of houses to the acre is clearly the most important consideration from the point of view of public health, the provisions with regard to factory areas and open spaces must not be overlooked. Factory life in the past has not had much to commend it from the point of view of health. Dr. Robertson in his report to the Birmingham City Council for 1912 has an interesting memorandum on the question of tuberculosis in factories, in which he says :—

"There appears to be no doubt that a considerable amount of harm is done to workpeople who are employed in badly-ventilated, dark, or damp factories, particularly when these conditions are associated with a dust-laden atmosphere. The damage in the first instance, which can often be traced back to conditions of employment, is a lowering of the resistance to disease, or the production of a soil favourable for infection at a later period by the germ of tuberculosis, from which tuberculosis follows in one or other of its various forms.

"Tuberculosis is still by far the most common cause of death in Birmingham, notwithstanding the fact that the disease is diminishing as a result of the better conditions of housing, factory labour, food supply, etc. About 1200 deaths are caused annually in Birmingham as a result of tuberculosis in all its forms. At any one time there are in the city probably over 10,000 people suffering from the disease. In addition, tuberculosis is probably the most expensive disease, as it is of long duration, and the commonest disease to attack the bread-winner of the family."

His suggestions for the prevention of this disease include the provision of modern methods of ventilation, the eradication of dampness and want of light, more cleanliness and better facilities for the removal of dust, and the usual precautions against expectoration, etc.

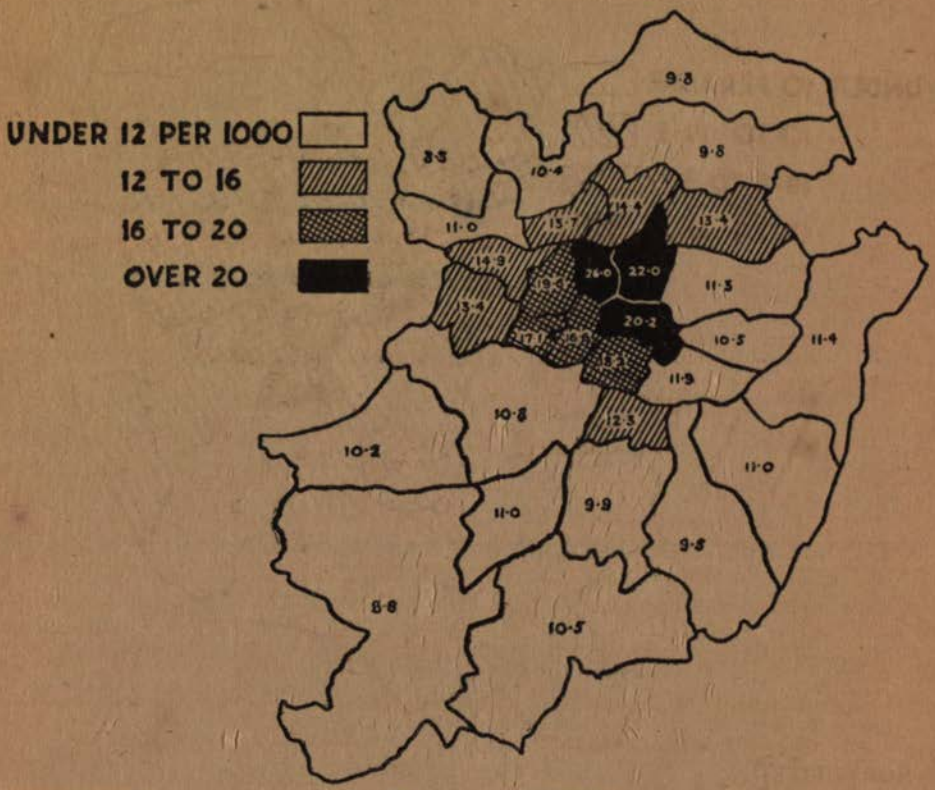
The factory area situated apart from the residential area, with all the conveniences and facilities which the modern city can provide, will be more likely to be healthy than if the community were to pay no regard whatever to the matter. Similarly with regard to open spaces.

The provision in the Town Planning scheme of large parks and open spaces is bound to be of the very greatest assistance to the health of the city. More important perhaps is the provision of gardens and children's playgrounds already referred to, and the whole tendency of the Town Planning scheme is in the direction of better health conditions for the whole community.

Given these better conditions for health, it would seem to follow that the general social and moral conditions would be improved.

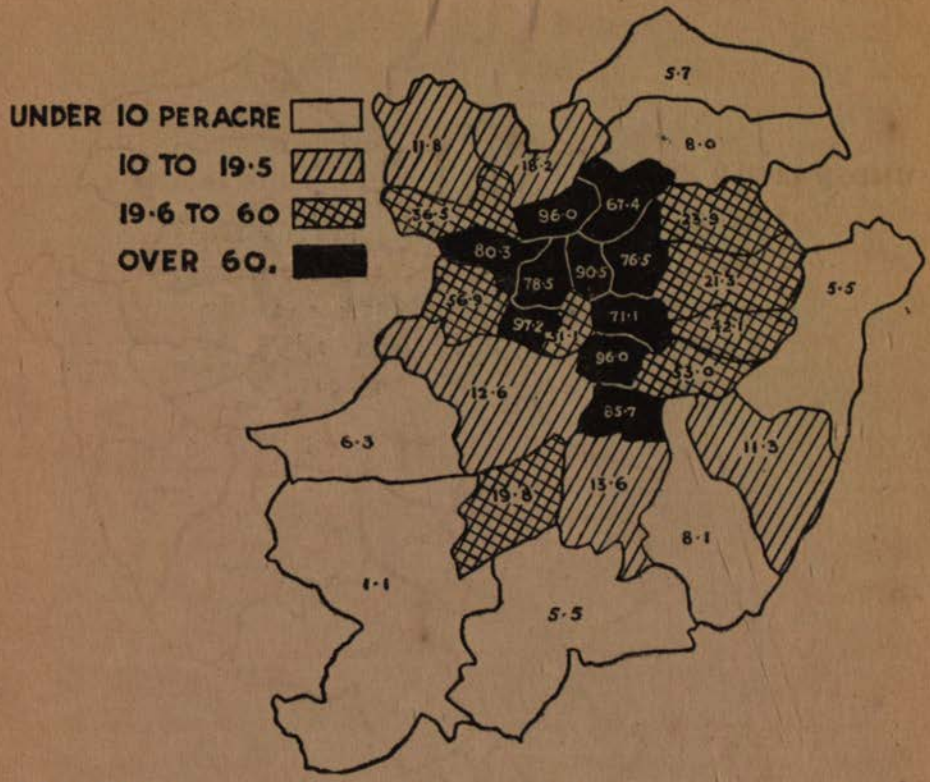
"If space permitted, an equally striking contrast in independence and moral standing could be shown between the central core and the working-class suburbs in Birmingham. In the latter there would be seen elementary

DEATH-RATES IN WARDS



SANDWELL	8·3	YARDLEY	11·4
NORTHFIELD	8·8	SPARKBROOK	11·9
SPARKHILL	9·5	BALSALL HEATH	12·3
ERDINGTON N.	9·8	ROTTON PARK	13·4
ERDINGTON S.	9·8	WASHWOOD HEATH	13·4
MOSELEY	9·9	LOZELLS	13·7
HARBORNE	10·2	ASTON	14·4
HANDSWORTH	10·4	ALL SAINTS	14·9
KING'S NORTON	10·5	MARKET HALL	16·6
SMALL HEATH	10·5	LADYWOOD	17·1
EDGBASTON	10·8	ST. MARTIN'S	18·2
ACOCK'S GREEN	11·0	ST. PAUL'S	19·6
SELLY OAK	11·0	ST. BARTHOLOMEW'S	20·2
SOHO	11·0	DUDDESTON	22·0
SALTLEY	11·3	ST. MARY'S	26·0

DENSITY OF POPULATION IN WARDS.



NORTHFIELD	1·1	SOHO	36·5
KING'S NORTON	5·5	SMALL HEATH	42·1
YARDLEY	5·5	MARKET HALL	51·1
ERDINGTON N.	5·7	SPARKBROOK	53·0
HARBORNE	6·3	ROTTON PARK	56·9
ERDINGTON S.	8·0	ASTON	67·4
SPARKHILL	8·1	ST. BARTHOLOMEW'S	71·1
ACOCK'S GREEN	11·3	DUDDESTON	76·5
SANDWELL	11·8	ST. PAUL'S	78·5
EDGBASTON	12·6	ALL SAINTS	80·3
MOSELEY	13·6	BALSALL HEATH	85·7
HANDSWORTH	18·2	ST. MARY'S	90·5
SELLY OAK	19·8	LOZELLS	96·0
SALTLEY	21·3	ST. MARTIN'S	96·0
WASHWOOD HEATH	23·9	LADYWOOD	97·2

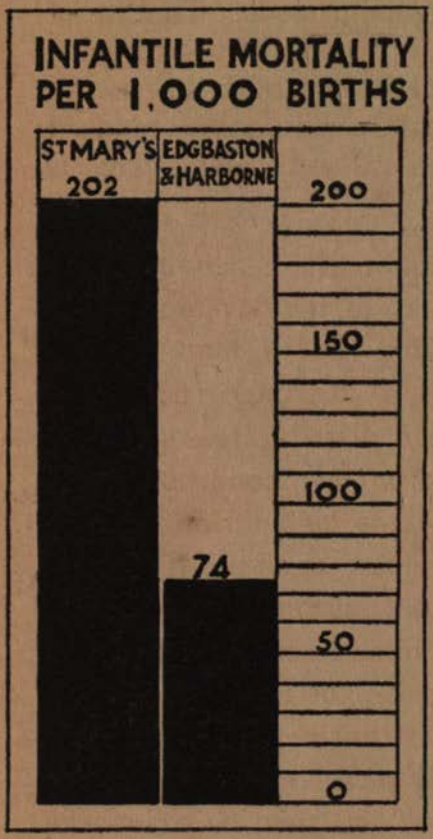
schools of the best type, with good playgrounds and well-fed scholars. Of these scholars a much greater proportion would be found passing into the secondary schools with which Birmingham is so well provided. We should find well-patronised free libraries and swimming baths. The churches and chapels would be seen working with a success altogether beyond what attends efforts equally strenuous in less fortunate neighbourhoods. The life of these working-class suburbs is open to many criticisms, as, indeed, is the average mode of life in suburbs in general, but in its broad outlines it attains a reasonable standard of physical, intellectual, and moral well-being. This is not true of the central districts."*

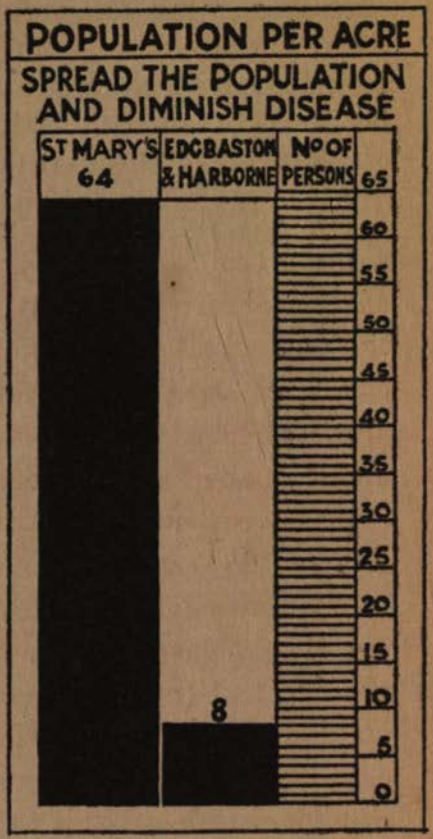
Important as heredity undoubtedly is, environment has yet a very large part to play in the development of the individual. It is impossible that a high type of character should be developed in the dark courts and alleys which so disgrace our large cities. Life is so sordid and in many cases so degraded by such conditions, that hope is crushed, and effort towards higher things seems useless. Tragic as this is in the case of adults it is absolutely criminal in the case of the children.

C. F. G. Masterman has described in memorable words the effect of these surroundings on the life of the young children who are compelled by the inexorable force of circumstance to live there. He pictures the children all eagerness to learn and to know, and then he draws the picture after the evil surroundings have done their fell work.

"No book will be opened again. The taste for form and colour has vanished; singing and dancing and the love of melody have dropped out of existence. The physical beauty has crumpled up and departed; long hours of desolating toil, charring, washing, the premature

* "English Town Development." F. Tillyard.


INFANTILE MORTALITY
PER 1,000 BIRTHS
ST MARY'S
202
EDGBASTON
& HARBORNE
74
200
150
100
50
0


POPULATION PER ACRE
SPREAD THE POPULATION
AND DIMINISH DISEASE
ST MARY'S
64
EDGBASTON
& HARBORNE
8
No OF
PERSONS
65
60
55
50
45
40
35
30
25
20
15
10
5
0

care of a family, early work in the factories has made the human body of man or woman stunted, deformed, haggard, a thing not good to look upon. Life is becoming contracted to the workshop, the small crowded home, and the daily journey from the one to the other. The spiritual arena, the vision of the Unseen often so startlingly revealed amongst our children when least expected, has given place to a vague discontent against whatever has ordered the present social conditions and a vague belief in the amiability of a distant and unknown God. Life may be tolerable or even happy in animal enjoyment and the alternation of rest and toil; but the waste of the incalculable possibilities in the vast, unimportant mass of human nature seems something that surely one day will demand explanation and requital."*

One of the most hopeful signs of the present day is that the awakened interest in the question of health and its consequences is not confined to any one class but is felt with intensity by the people most likely to benefit.

The great stirrings of social unrest, which are such a striking manifestation in these days, are not controlled by considerations of finance only. The demand is not for a higher wage merely. In essence the demand is for a better way of life, for fuller opportunities, for the chance of self-expression in ways hitherto denied. Men ask for houses fit to live in—with gardens they can cultivate, and air they can enjoy. They ask for a share in the good things of this life, in the things which elevate and inspire, and sooner or later that demand will be irresistible.

Town Planning and all that it connotes is broad-based on this rock—that the deepest and most permanent instincts of mankind are behind it, the desire for order, for health, and for beauty.

* "The Heart of the Empire." C. F. G. Masterman.

The words spoken by the President of the Local Government Board* may well form a fitting conclusion to this chapter :—

" ' I do not think,' he said, ' that the effect of good environment, of fine buildings, of pleasant homes, upon the character, temperament, will, disposition, and energy of the people sufficiently dawns upon the average citizen. Cities are not only emporiums for goods, centres of commerce and trade ; they are something more than a mere cash-nexus ; they are places where utility, comfort, and beauty can be and ought to be combined, so that the passer-by can, from what he sees, feel something to which his sense of beauty and of domestic comfort can respond all the better for having lived in and seen beautiful buildings every day of his life, places which by their beauty, their amenity, their grace, and above all their greenery, create a joy in life which we Britons sometimes lack, and give a spacious leisure in idle moments, when study wants a respite and honest labour requires a pleasant rest.

" ' . . . So long as casual labour broods in squalid lairs, in sunless streets, and ugly dwellings are its only habitation, we shall continue to turn out nervous manikins instead of enduring men. Motherhood, childhood, youth, society, and the race demand the demolition of the soul-destroying slums. . . . The mean street produces the mean men, and the lean and tired women, and the unclean children. . . . Let every nation with its own character, individuality, climate, and physical structure go to work, and copy nobody.

" ' . . . Plan the town if you like, but in doing it do not forget that you have got to spread the people. In the light of some Continental experience that wants driving home, plan the town, but spread the people. Make wider roads but do not narrow the tenements behind. Dignify the city by all means, but not at the

* Conference at the Royal Institute of British Architects, 1910.

expense of the health of the home and the family life, and the comfort of the average workman and citizen. . . . If you do this, we all of us shall be rewarded by the betterment of our towns, the beautification of our streets, the improvement of our suburbs. We shall have made one step forward to still further elevating, improving, and dignifying the life of our citizens.' "

CHAPTER IX

CONCLUSIONS

THE preceding chapters, if they have served their purpose, will have made it clear that the present Town Planning Act is a great instrument of progress in the hands of the Local Authority. It gives wide and improved powers to the community never before possessed, the need of which has become apparent, and under the Act it may be said that for the first time the community is given an adequate control of the town's future development. The facts in this book show how greatly this control has been needed, and it is obvious that the tendencies in municipal and national life towards expansion make the control not merely a matter of urgency but necessity. But it is a commonplace that reforms come slowly, and it is not suggested that the Town Planning Act is the final word in municipal advance. Indeed, after four years' experience of its working, it is even now clearly seen how far it falls short in certain respects of what might reasonably be entrusted to Local Authorities. For example, the Act does not give powers to municipalities to own and purchase land, save for some specified purpose. Mr. Nettlefold, chairman of the Housing Committee, in his speech to the Birmingham City Council in 1906, reporting on their visit to Germany, said :—

" At Ulm we found the opposite policy adopted (from that of Berlin)—wide, well-made streets wherever

necessary, but narrow, inexpensive streets in purely residential quarters, front gardens being provided in order to preserve a proper distance between the houses on either side of the street. Here we also learned how the Corporation assist working-men to acquire the houses they live in, thereby ensuring that the houses are well kept, as well as well built. Another interesting feature was their far-sighted policy of encouraging manufacturers to build works in the town by letting them have land on favourable terms, and giving them every convenience. But the most important of all is Ulm's municipal land-purchase policy. A few years ago they owned three-fifths of the land within their boundaries; to-day they own four-fifths, an increase of 33⅓ per cent. Whilst others have been explaining what everyone knows—that the land question is largely at the root of the housing question—Ulm has been acting, and has been buying land with most satisfactory results. It is to be hoped that it will not be long before Birmingham is able and willing to carry out vigorously and judiciously a similar policy."

This was said seven years ago, and since then Birmingham, by formulating Town Planning schemes, has endeavoured to carry out the first part of the programme; but the fundamental question of the ownership of the land has not yet been faced.

It is becoming more and more evident that Town Planning will only be partially successful until the Corporation owns the land.

The following quotation gives further details of Ulm's successful policy referred to by Mr. Nettlefold:—

"When the question of acquiring the fortress lands from the military authorities [at Ulm] was under consideration it was apparent that if the purchase was carried out the land lying beyond the fortress wall,

upon which building had hitherto been prohibited, would acquire a building value and naturally rise in price. As the municipality were undertaking the purchase of the fortifications, and the expense of making new streets, etc., it was considered very desirable that the town should secure as much as possible of the increase in value, and with this object in view the municipality initiated a land-purchase policy, and from 1891 onwards have bought large areas of land, amounting to 1209 acres, at a total price of £291,941 ; 409 acres have been sold for £342,959, giving a profit to date of £51,018. As a result of these purchases alone the town now possesses 806 acres more land than in 1891 ; and, further, has made a profit of upwards of £50,000. Ulm has the lowest town taxes of all the large towns of Würtemberg. In addition to the above-mentioned purchases, the municipality, as before explained, bought the disused fortress (172 acres) for £200,000 in order to improve the sanitary conditions, etc., of the town. To-day the town owns more than three-quarters of the land within its own boundaries, and much land beyond this limit—a total of 4940 acres. Tramways connect this outer land with the city ; water power supplies the electric current for tramway and private purposes. The possession of such a large area enables the town to keep the price of land within a reasonable limit, and to sell or let it at a moderate rate for undertakings of public benefit, such as factories, houses for workmen, etc. There is a condition that the land sold by the town must be developed within a specified number of years, and the town is entitled to redeem the land at the price for which it was sold, plus 3 per cent interest, if the purchaser does not build upon it or if he desires to transfer the land before building. For workmen's houses land is sold at a very low price, but always with conditions which prevent abnormal profits being made in selling the houses erected upon it."*

* *Garden Cities and Town Planning Magazine.* May, 1911.

The necessity for the complete control of land by purchase will increasingly make itself manifest. However much the several owners may wish to develop their own land wisely, and however good their individual schemes may be, yet the harmonising of so many people's ideas and schemes is in itself a grave difficulty, and only leads in the end to compromise. This is what is meant when so many people say they are in favour of Town Planning and yet oppose schemes which immediately affect them. The Local Authority can never act as boldly and comprehensively under these circumstances as if it had sole control. The point at which it will first come with urgency will probably be with respect to factory areas. So far the question of compensation and betterment has not been discussed, partly owing to the inherent difficulties, but principally because in the absence of actual experience it is difficult to say how matters stand. For this reason it is better for all parties to settle matters by agreement, neither side claiming compensation or betterment, but taking it for granted that in a general way they balance. While this may be a good working guide, it is by no means clear that it is the correct solution, as in course of time the increment value of land opened out will continue to increase, and the increase will be largely due to the activities of the community as a whole. One of the difficulties in the way is as to the exact period at which betterment shall be estimated, as it is, generally speaking, a constantly increasing amount; while compensation is a thing which can be estimated immediately, and dealt with. It is, therefore, advisable to come to an agreement, because while compensation is capable of exact statement, betterment, though ultimately much the larger in amount, is at any given moment of time difficult of assessment.

Ownership of land, therefore, not only disposes of difficulties with regard to the making of the scheme, but also assures that the community will get the full benefit of its work and expenditure in years to come.

Another driving force will be the constantly increasing pressure of the rates and the search for fresh means of income. All schemes of land valuation and taxation are merely an attempt to get at the increased value of land created by the activities of the community, but no scheme is so perfect or complete as the actual control of the land itself. Hence, by one means and another, we are slowly being driven to face the problem of land purchase, and when that comes about Town Planning will be so much advanced that it, as a measure of compromise, will cease to exist in its present form and become purely Town Development. Town Development, as it exists on the Continent, stimulates the city to develop all its resources, either by attracting manufactures, developing transport—such as railways and harbours—or by making its residential and business sites as eligible as possible and best-fitted for the purposes for which they are intended.

The example of Letchworth is useful in this connection, as showing how the presence of an industrial community enhances the value of the land beyond the cost of purchase and development, and a great increment accrues to the community when it owns it. The following facts are taken from a report issued in 1907 just after the estate had been valued.

"The total amount of capital expenditure on the estate, including the price paid for the property and the cost of the gasworks, water works, electric works, highways, sewerage, parks, open spaces, improvements, offices, etc., was, up to the date of the valuation, £247,806 13s. 11d.

"Two firms of valuers of the highest repute . . . report that at that date (September 30th, '07) the Company's estate at Letchworth was worth £379,500 not including anything for timber and gravel pits, or any value of the gas, water, and electric works as commercial undertakings. The valuation therefore shows an appreciation of £131,693 6s. 1d. in the Company's property over and above the cost, or, writing off the expenses of prospecting and preliminary expenses, general development, and general revenue and expenditure account an amount of £34,645 19s. 10d., leaves a net balance of £97,047 6s. 3d., representing the net increment in value of the estate above all that it has cost, whether directly or indirectly."

This was in the short period of three years when the town was in its infancy. Another valuation is contemplated, but in the meantime subsidiary valuations have been made by the same valuers, which prove that what has since been spent has improved in value by at least as much. This is further borne out by the fact that the Company is now making handsome profits.

In the report for 1913 Mr. Trustram Eve is quoted as giving a certificate to the following effect:—

"I have made a careful inspection of the Letchworth Garden City, Limited, and have no hesitation in giving my opinion that 'the value of the freehold estate at Letchworth, owned by this Company, at September 30th, 1913, exceeded the paid up share capital and total liabilities of the Company at that date, which amounted to £462,586 16s. 8d.'"

The ownership of land is stimulating activities in all directions; factory sites have been formed on the north-east side; railway-sidings have been provided in agreement with the Great Northern Railway; industrial suburbs have been built; a large residential district has

been developed in which many people live who have businesses in London; and a golf course has been laid out. The number of houses to the acre is strictly limited, so that the town has a countrified aspect such as no existing city has. The last phase to be undertaken with due regard to the whole idea and outlook of the town is the development of the public square with its public buildings. The land for these buildings was reserved from the first, and when the time comes for the actual building there will be nothing to hamper these being erected, not only on generous lines, but with great economy owing to the low price at which the land was purchased. It is hoped some day that the citizens themselves will take over the Company and own the town, and in this way secure all the benefit of their own exertions. Perhaps the most interesting part of the experiment is the agricultural belt, bringing agriculture into the closest touch with its market, and at the same time preserving the features of the city without any risk of the speculator reaping advantages at the expense of the public.

If this can be done privately, it should be possible municipally. Ten years is not long in the life of a town, and return on the outlay ought to be expected by then. From the above figures it appears that an estate may, if properly developed, increase in value by 30 per cent in a very short time.

Parliament has hitherto been suspicious of granting general powers to Local Authorities to purchase land, on the ground that it is not desirable that they should speculate in this direction. This objection, however, does not stand examination. There are many other powers granted to Local Authorities, which in their nature are more speculative; for instance, many small

authorities have undertaken the provision of electric light and tramways where the area is too restricted to allow their economical development, which have often become a charge on the rates. In no case has the ownership of land become a charge on the rates; this of course is excluding land purchased in connection with improvement and clearance schemes, which, of necessity, are often a charge on the rates. The question really is, is the purchase of land in areas likely to be developed? As the likelihood of this development has to be demonstrated before the Local Government Board give leave to prepare a Town Planning scheme, it may be taken that all land in such areas satisfies this condition. There seems, therefore, no valid reason why general powers of purchase should not be granted in connection with the Town Planning Act.

Although the Local Authority does not possess this valuable power of purchase, the Town Planning Act does confer on it certain powers of dealing with land which may be made of the utmost service. Among these new powers conferred on the municipality are powers to assist landowners towards the solution of their difficulties. Hitherto this has been only possible by Act of Parliament —a particularly expensive and cumbersome method. Now the municipality may suggest rearrangements of boundaries to the mutual benefit of all concerned at a minimum of trouble and expense. It often happens that in making a new road one owner is left with a narrow strip of his land on one side of the road which is too small to develop by itself, but which also effectually blocks the owner behind from any frontage. An amicable readjustment is the obvious solution, the owner with the frontage giving up some of his frontage in exchange for sufficient land behind to allow him to develop the remainder of his

frontage properly. The procedure is that the Corporation may require provision to be made for the adjustment or alteration of boundaries, and an appeal either by the Corporation or interested persons may be settled by an arbitrator appointed by the Local Government Board. The powers go further than this and provide either that the Corporation shall pay a sum agreed upon for the execution of the provision made, or the Corporation may purchase such land and either sell or lease it, or may appropriate it for any public purpose. This gives a modified power of purchase without specifying the use to which the land is going to be put.

In Frankfort they have gone much further in the "Lex Adickes" in which a large number of small plots or strips of land may be aggregated and redistributed in proportion, but in much more convenient form. It has already been found very useful. Such an arrangement obviously tends to increase the value of the land as a whole.

Another need which has become apparent is that the Town Planning powers should be applied in all city reconstruction schemes. At present the application of the Act has been to the undeveloped areas of the city, but great advantage would result from an amendment of the Act giving complete powers to deal with the centres of existing cities. The matters which would thus be dealt with would include control as to the widening of streets, the allocation of sites for various purposes, and control over the style and the character of the buildings to be erected. The Medical Officer of Health for the city of Birmingham says in his report for 1912 :—

"To complete the City's Armamentarium against bad housing conditions, power is now required to enable Town Planning of the central areas, with a view to enabling the owners of property in the centre to develop

their land which has been cleared of bad houses in a way which will be permanent and not liable to the risks which they are under at the present time, and which to a large extent prevent adequate housing accommodation being provided in these central areas."

Too frequently the intrusion of a factory into an area which is otherwise residential has done much to remove the good effect of the re-construction scheme. Closely allied to this matter is the power which is needed to preserve existing developments in the city. Certain areas, which have been developed on wise and sound lines and which are therefore excluded from the operation of the Town Planning Act, have no security that some unforeseen development will not alter the character of the district and spoil what otherwise would be a desirable area. Town Planning powers, therefore, must be extended so as to give the Corporation wide discretionary powers in cases of this kind.

A further matter which any amendment of the Act must comprise relates to railway companies and to Government departments. There is little question that at present, if a Town Planning scheme is in existence, it gives the Local Authority a *locus standi* with reference to all new railways and canals, and ensures that if there is any danger of the scheme being injuriously affected, the protest of the Local Authority will be heard. The importance of this cannot be overestimated, and it is undoubtedly of great service in matters of negotiation. In the Finchley district the fact that the Town Planning scheme was in existence undoubtedly served to defeat the Great Northern Railway Company's scheme.

"They [the promoters] have had their lesson and they will do well to take it to heart. They are, as we remarked on a former occasion, probably surprised at

the opposition aroused by their project. They have learnt to their discomfiture that public utility is not the sole measure of the merits of the project, but that public amenities must also henceforth be taken into equal, if not greater, account. It is a very salutary lesson, and it will in the future be found applicable to many other projects besides that of the Northern Junction Railway."*

By a wise co-operation with railway companies, railway stations may be made a centre for large civic improvements, such as those which have taken place at Frankfort and other Continental cities. In the same way, post offices and military barracks should be amenable to the wishes of the Local Authority. In the event of being unable to arrive at a satisfactory compromise, the Local Authority should be given power to deal with the Authorities. The Local Authority, too, should be able to acquire land for the purpose of light railways, on much the same terms as it now acquires land for road purposes.

The question as to the amendment of the Act is now being discussed by many Local Authorities throughout the country, and the Local Government Board will be able to draw from the experience of many Local Authorities as to what amendments are desirable.

In another chapter the desirability of amending the procedure regulations has been pointed out, and it is equally clear that many desirable reforms must await the amendment of the Act itself; for example, the method of revising a Town Planning scheme ought to be made very much simpler. The present method laid down by the Act is cumbersome and irritating and will operate as a bar to many desirable amendments unless the restriction is removed. Similarly, the procedure designed for private owners' schemes requires great simplification if

* *Times*. June 27th, 1913.

it is desired to encourage those schemes and to make them really practicable. It is desirable, also, to give the Local Authority powers with regard to railway stations and canal basins. The experience of Continental towns in the provision of facilities for manufacturers has been such as to justify the greatest hopes as to their provision, and in these days of acute competition it is more than ever desirable that English Local Authorities should be invested with similar powers. Indeed, one may forecast the certainty of larger and still larger powers being given to Local Authorities. It is significant that there is already a movement on foot in South Lancashire for a Federal Authority to deal with Town Planning matters for the whole of that district. The Central Authority has given a considerable stimulus to that kind of movement, by consistently delegating more and more power to Local Authorities, and the future is certain to see a considerable extension of this delegation. It may be said, indeed, that each individual Local Authority will have its own particular problems and will desire its own particular increase of power.

The question very much before the public at the present time is that of the accessibility of land for building and manufacturing purposes, and there is a further light on the powers which Town Planning confers. Hitherto, only the inner ring of agricultural land immediately adjacent to the built-up portion of a town could be developed. But Town Planning schemes destroy the monopoly of the owners of this ripe belt, and convert the land beyond into "ripe" land also. The owner of land on the immediate margin of the town is thus brought into competition with the owner at the further margin, the price at the further margin being raised; the average price throughout the area is, however, reduced.

The perfecting of means of transit, the cheap production of power, and the facilitating of the provision for small or co-operative industries, will undoubtedly alter the conditions of city life. Factories, especially in the lighter trades, will undoubtedly move to districts where expenses are less, where there is plenty of room for expansion, and where every inducement is held out for their development. The modern tendency is for cities to expand by absorbing their smaller neighbours, and also to have enough open country under their control for future expansion. Small industrial areas will grow up round the means of transit, which will rapidly become the nucleus of subsidiary towns. Each factory area will become a market for agricultural produce, and an outer ring of small holdings and market gardens will grow up round these new villages. On the other hand, village industries and co-operative farming will also require factories and warehouses to deal with their products. The magic of cheap capital, better transit and access to the land, with the stimulation in house-building, which seems imminent, will entirely change the country-side. It is therefore important that Town Planning schemes should be drawn up in such a way that they can deal with these new developments. Elasticity and local discretionary powers must be the key-notes. The very fact that Local Government areas will tend to become larger will of itself mean larger local powers, similar to the sovereign powers enjoyed by many German cities to-day. Kropotkin has foreshadowed this and has shown how the interlocking of town and country is bound to come, when industrial methods will influence agriculture, and freer access to the land affect industrial conditions.

There is one further small point that needs adjustment and that refers to the taxation of open spaces

reserved under a Town Planning scheme. These spaces are reserved for the general good of the district, and it seems specially unfair that allotments, for instance, should be subject to the undeveloped land tax. Where allotments and small holdings, or private open spaces, are reserved as part of a scheme, and have been deemed "reasonable" by the Local Government Board, they should automatically be released from this tax, a tax designed to bring undeveloped land into use, whereas such land is "developed" and allocated for a specific use, a use which cannot be altered without contravening the scheme.

It is not necessary to speak of days far ahead, when cities will be organised on comprehensive lines with due regard to the health and to the welfare of all the members of the community, but if this book can do something to suggest to the minds of public men that that future is worth working for and that its attainment is possible, its purpose will be well served.

APPENDIX

60,534 (*18th August*, 1913.)

HOUSING, TOWN PLANNING, &c. ACT, 1909:
APPROVAL OF TOWN PLANNING SCHEME UNDER PART II.

CITY OF BIRMINGHAM.

East Birmingham Town Planning Scheme.

To the Lord Mayor, Aldermen, and Citizens of the CITY OF BIRMINGHAM;—

To all owners of land comprised in the Scheme set out in the Schedule hereto, and to all other persons interested in the said land;—

And to all others whom it may concern.

WHEREAS it is enacted by sub-section (4) of Section 54 of the Housing, Town Planning, &c. Act, 1909 (hereinafter referred to as "the Act"), which Section is included in Part II. of the Act, that a town planning scheme prepared or adopted by a local authority shall not have effect unless it is approved by Order of Us, the Local Government Board, and that We may refuse to approve any scheme except with such modifications and subject to such conditions as We may think fit to impose;

And whereas the Lord Mayor, Aldermen, and Citizens of the City of Birmingham, acting by the Council (hereinafter referred to as "the Local Authority"), have prepared a town planning scheme (hereinafter referred to as "the Scheme") in accordance with the provisions of Part II. of

the Act and of the Town Planning Procedure Regulations (England and Wales), 1910, and have submitted the Scheme to Us for Our approval;

And whereas We have made certain modifications in the Scheme, and the Scheme as modified by Us is set out in the Schedule hereto;

And whereas by sub-section (2) of Section 59 of the Act it is enacted that property shall not be deemed to be injuriously affected by reason of the making of any provisions inserted in a town planning scheme, which, with a view to securing the amenity of the area included in the Scheme or any part thereof, prescribe the space about buildings or limit the number of buildings to be erected, or prescribe the height or character of buildings, and which We, having regard to the nature and situation of the land affected by the provisions, consider reasonable for the purpose;

And whereas clauses 7, 17, 18, and 19 of the Scheme, as modified and set out in the Schedule hereto, contain provisions which prescribe the matters mentioned in sub-section (2) of the said Section 59 for the purpose therein mentioned:

NOW THEREFORE, in pursuance of the powers given to Us by the Statutes in that behalf, We hereby Approve the Scheme as modified and set out in the Schedule hereto, and We hereby Declare that, having regard to the nature and situation of the land affected by the provisions of Clauses 7, 17, 18, and 19 of the Scheme, We consider those provisions reasonable so far as they relate to the purpose mentioned in sub-section (2) of Section 59 of the Act.

SCHEDULE.

CITY OF BIRMINGHAM.

EAST BIRMINGHAM TOWN PLANNING SCHEME.

DEFINITIONS.

(1) "The Corporation" means the Lord Mayor, Aldermen, and Citizens of the City of Birmingham; "The Board" means the Local Government Board; "The Act of 1909" means the Housing, Town Planning, &c. Act, 1909; "The Map A" [or "the Map B" as the case may be] means the Map A [or Map B] which has been prepared in duplicate, each of such duplicates being sealed with the official seal of the Board and marked "Map A [or Map B] referred to in the East Birmingham Town Planning Scheme," and of which duplicates one is deposited in the office of the Board and the other in the office of the Town Clerk of Birmingham. Definitions.

The several words or expressions which are not defined or used in Part II. of the Act of 1909, but which are defined in the Public Health Act, 1875, shall (subject as hereinafter provided) have the same several meanings when used in this Scheme as are specified in the latter Act, and land shall include any interest in land. Provided that for the purposes of Clauses 8, 9, 11, 15, 16, 17 and 33 of this Scheme "owner" shall have the same meaning as in the Public Health Act, 1875.

The enclosure numbers mentioned in this Scheme refer to those shown upon the Map A.

The sheets of street cross-sections appended to this Scheme and headed "Sheet A" and "Sheet B" respectively shall, with the marginal notes thereon, operate and have effect as part of this Scheme, and are hereinafter referred to as "Sheet A" and "Sheet B" respectively.

RESPONSIBLE AUTHORITY.

Responsible authority.

(2) The Corporation shall be the Authority responsible for enforcing the observance of this Scheme and for the execution of any works which under this Scheme or Part II. of the Act of 1909 are to be executed by a local authority.

AREA.

Area.

(3) The area to which this Scheme shall apply (hereinafter called "the area") shall be that within the inner edge of the boundary line coloured neutral tint on the Map A, excluding the portion of that area edged brown on that Map.

STREETS.

New streets.

(4) Save as hereinafter provided, for the purpose of this Scheme the following new streets (which expression shall include widenings) shall be constructed by the Corporation under and in accordance with this Scheme, and in the lines indicated on the Map A, viz.:—

Street No. 1. A widening of part of the existing highway known as Bromford Lane on the west side thereof, for its length between Bromford Bridge and the south-eastern corner of Enclosure No. 67, and crossing Enclosures Nos. 47, 49, 51, 65, 66 and 67.

Street No. 2. A new highway 100 feet wide, being a continuation of Bromford Lane, commencing by a junction with Street No. 1 at the south-eastern corner of Enclosure No. 67, and terminating by a junction with Street No. 3 at the north-eastern corner of Enclosure No. 92, and crossing Enclosures Nos. 87, 88, 86, 89 and 92.

Street No. 3. A widening of a further part of the existing highway known as Bromford Lane on the west side thereof, commencing by a junction with Street No. 2, and terminating by a junction with Washwood Heath Road at or near the Fox and Goose Hotel and crossing Enclosures Nos. 91, 129 and 131.

Street No. 4. A widening of the existing highway known as Stechford Lane on the west and south-west sides thereof, for its length between its junction with Washwood Heath Road and Stechford Bridge, and crossing Enclosures Nos. 132, 146, 149, 150, 151 and 153.

Street No. 5. A widening to 100 feet of the existing highway known as Burney Lane, commencing by a junction with Alum Rock Road and terminating by a junction with Street No. 4, and crossing Enclosures Nos. 143, 144, 157, 154, 145, 148 and 149.

Street No. 6. A new highway 100 feet wide, commencing by a junction with Belchers Lane and Bordesley Green, and forming a continuation of the latter road, and terminating at the River Cole, and crossing Enclosures Nos. 406, 397, 386, 396, 395, 387, 394, 393, 392, 390, 391 and 371.

Street No. 7. A widening to 60 feet of part of the existing highway known as Yardley Road, for its length between the north-western corner of Enclosure No. 437, and Street No. 8, and crossing Enclosures Nos. 437, 440, 442, 444 and 445.

Street No. 8. A new highway 60 feet wide, being a continuation of Street No. 7, commencing by a junction with such street, and terminating at the River Cole, and crossing Enclosures Nos. 445 and 446.

Street No. 9. A new highway 80 feet wide, commencing at the River Cole, and terminating by a junction with Street No. 10, and crossing Enclosures Nos. 471, 472, 466 and 465.

Street No. 10. A widening to 80 feet of part of the existing highway known as Hobmoor Road, commencing by a junction with Street No. 9, and terminating at the south-western corner of Enclosure No. 348 and crossing Enclosures Nos. 465, 453, 455, 456 and 348.

Street No. 11. A new highway 42 feet wide, commencing by a junction with Whitacre Road, and forming a continuation of such road to a point 135 feet or there-

abouts measured in an easterly direction from the termination of Whitacre Road and thence in a northerly direction, terminating at the southern boundary of the London and North-Western Railway opposite Ludlow Road and crossing Enclosure No. 312.

Street No. 12. A new highway 50 feet wide commencing by a junction with Coventry Road (at a point about 420 feet west of Hay Mills Bridge), and terminating by a junction with Street No. 6, and crossing Enclosures Nos. 497, 483, 482, 485, 479, 480, 476, 475, 474, 466, 467, 468, 449, 448, 447, 444, 418, 416, 415, 411, 410, 412 and 392.

Street No. 13. A new highway 50 feet wide, to form a continuation of Street No. 12, commencing by a junction with Street No. 6, passing under the London and North-Western Railway, and terminating by a junction with Cotterills Lane, and crossing Enclosures Nos. 392, 390, 372, 373, 189, 366, 368, 369 and 186.

Street No. 14. A new highway 42 feet wide, commencing by a junction with and forming a continuation of Foxton Road, and terminating by a junction with Ward End Park Road and crossing Enclosure No. 265.

Street No. 15. A new highway 42 feet wide, commencing by a junction with and forming a continuation of Naseby Road, and terminating by a junction with Street No. 17 and crossing Enclosure No. 264.

Street No. 16. A new highway 42 feet wide, commencing by a junction with Mendip Avenue and terminating at a point 70 yards or thereabouts, measured in a southerly direction from the south side of such Avenue and crossing Enclosures Nos. 274, 264 and 275.

Street No. 17. A new highway 42 feet wide, commencing by a junction with and forming a continuation of Nansen Road, and terminating by a junction with Street No. 14 and crossing enclosures Nos. 264 and 265.

Street No. 18. A new highway 42 feet wide, commencing by a junction with and forming a continuation of Ward End Park Road, and terminating by a junction

with Washwood Heath Road, and crossing Enclosure No. 255.

Street No. 19. A widening to 50 feet of an existing highway known as Drew's Lane, commencing at its junction with Washwood Heath Road, and terminating at its junction with Street No. 1, and crossing Enclosures Nos. 215, 216, 217, 76, 74, 59, 62, 63, 64, 54 and 65.

Street No. 20. A widening to 50 feet of an existing highway known as Black Pit Lane, commencing at its junction with St. Margaret's Road, and terminating at its junction with Street No. 1, and crossing Enclosures Nos. 68, 70, 66, 67 and 65.

Street No. 21. A new highway 42 feet wide, commencing by a junction with and forming a continuation of Morris Road, and terminating by a junction with Street No. 3, and crossing Enclosures Nos. 91 and 129.

Provided always that with the consent of the Corporation the new streets above described, or any of them, or any part thereof, may be constructed by any person other than the Corporation on such terms as to cost as the Corporation may agree.

Time for constructing streets.

(5) The said new streets described in Clause 4 of this Scheme shall be commenced at the discretion of the Corporation, subject to the right of any person aggrieved by the delay of the Corporation in commencing any of such streets to appeal under Clause 34 hereof. Streets shall be deemed to have been commenced within the meaning of this clause as soon as they are cut or laid out to formation level and the bottom layer of the foundation has been laid thereon.

Completion of streets.

(6) With regard to any one of the new streets described in Clause 4 of this Scheme, the Corporation shall complete the construction of the carriageway and footways thereof, if and when not less than 75 per cent. of the total frontage to the street shall have been built up to or appropriated as curtilages for buildings in existence at the time, and any necessary drains, gas, water, or other services in connection with the buildings in the street have been laid, but otherwise

(subject to Clause 5 hereof) the said new streets shall, subject to the right of any person aggrieved by the delay of the Corporation in completely constructing the same to appeal under Clause 34 hereof, be completely constructed by the Corporation at such respective times as they shall determine in each case.

Provided that any street 100 feet wide to be constructed by the Corporation of the A 1 type of cross-section shown on Sheet A shall be deemed to be constructed within the meaning of this clause when so much of it shall have been completed as appears in Street Cross-section A1 primary section shown on Sheet A. Provided further that any such street 100 feet wide may be constructed as appears in Street Cross-section A1 ultimate section, as shown on Sheet A, as and when the Corporation shall think fit.

Method of constructing streets; building lines.

(7)—(*a*) The numbers in the first column of the following table refer to the numbers of the new streets described in Clause 4 of this Scheme, and the numbers in the second column of such table refer to the numbers on Sheet A, and the respective streets numbered in the said first column shall be constructed in accordance with the respective street cross-sections shown opposite thereto in the said second column.

TABLE REFERRED TO.

No. of New Street.	No. of Cross-Section.
1, 2, 3, 4, 5, 6	A 1
9, 10	A 2
7, 8	A 3
12, 13, 19, 20	A 4
11, 14, 15, 16, 17, 18, 21	A 5

Provided that in the case of any street not of the same width throughout, so much of the length of such street as varies in width from such of the street cross-sections shown on Sheet A as is applicable to the street in question, shall be carried out in such manner as the Corporation think fit.

(*b*) Subject to any right of appeal conferred by Clause 34 of this Scheme, all streets in the area constructed otherwise

than by the Corporation shall be constructed in conformity with the provisions of this Scheme, with such turning and crossing places and access ways from the carriageway to the forecourt, and of such materials, of such widths (not exceeding 60 feet, except by agreement) on such sites, and generally in such manner as shall be required by the Corporation, and shall not be commenced until all notices required by the byelaws for the time being in force in the City of Birmingham shall have been first sent to the Corporation, and until all plans and sectional drawings so required shall have been first submitted to and approved of by the Corporation. The mode of construction of any such street shall conform to such one of the street cross-sections, shown on Sheet B, as shows the width between the forecourts required under this clause, or to such other street cross-section submitted by the owner as the Corporation may in any particular case approve. Provided that where any street cross-section shall have been determined under this clause the Corporation may require that the street in question shall be constructed according to a cross-section involving greater cost in construction, in which case the street shall be constructed in conformity with the last-mentioned cross-section and the additional cost shall be borne by the Corporation.

(*c*) The building lines in respect of the new streets described in Clause 4 of this Scheme, and the building lines in respect of other streets or proposed streets marked on the Map A, shall be those shown on the Map A; and in any existing street, where no building line is shown on Map A, the Corporation may determine the building line when any plan for any building in such street is submitted to them for approval, provided that such building line shall not be less than 36 feet or, except by agreement, more than 41 feet from the centre of such street.

(*d*) Where the building lines shown on the plans submitted to the Corporation for approval vary from those shown on Sheet B, and applicable to the street in question, they shall be subject to the approval of the Corporation.

(*e*) No building or other erection other than a boundary

wall or fence shall be constructed nearer to the centre of the street than the building line applicable to the street in question shown on the Map A or Sheet B or approved or determined as aforesaid.

(*f*) Any consent of the Corporation under Section 3 of the Public Health (Buildings in Streets) Act, 1888, shall not be unreasonably withheld.

Paving of footpaths.

(8) In the event of the owners representing not less than three-quarters of the total length of the frontage to a street requesting the Corporation to pave the footpaths, the Corporation may, if they deem it desirable so to do, take up the gravel and lay paving in lieu thereof, and declare the cost to be private improvement expenses, in which case such cost shall be dealt with in the same way as private improvement expenses under the Public Health Act, 1875.

Street plans for adjoining estates.

(9) In addition to any powers now or hereafter conferred upon them by Section 17 of the Public Health Acts Amendment Act, 1907, or any Act amending the same, the Corporation, whenever any plan for a new street within the area shall be submitted to them for approval, may, by notice in writing, require any owner or owners of any estate or lands within the area, the development of which will be affected by the construction of such street, to furnish to the Corporation, at the expense of such owner or owners, and within a reasonable time to be specified in such notice, plans and particulars showing generally a scheme for the development or laying out of such estate or lands.

Incidental street works.

(10) So far as the Corporation may deem necessary, they may require that any person constructing or laying out streets in the area shall fence the same and plant them with trees, and that he shall provide and construct all proper approaches, embankments, bridges, arches, girders, retaining walls, culverts, drains, works, and conveniences connected therewith or incident thereto; and for the purpose of commencing or constructing any of the new streets described in Clause 4 of this Scheme the Corporation may provide and construct all such works as aforesaid as may be necessary.

(11) The cost of construction of streets shall be defrayed in the following manner: In the case of any street in the area constructed otherwise than by the Corporation the whole cost shall be defrayed by the person constructing the street unless the Corporation shall agree (and they are hereby empowered to agree) with such person to contribute to the cost. The Corporation shall construct wholly at their own expense the new streets described in Clause 4 of this Scheme, and numbered 1, 2, 3, 4, 5, 6, 7, 10, 11, 19 and 20, and also so much of Street No. 8 as lies between its junction with Street No. 7 and a point 107 yards measured in a westerly direction from the termination of Street No. 8 in the centre of the River Cole. In the case of any other of the said new streets, the whole cost shall, subject to the proviso to Clause 4 hereof, be defrayed in the first instance by the Corporation, but (with the exception of the said new streets numbered 1, 2, 3, 4, 5, 6, 7, 10, 11, 19, and 20 and the said part of Street No. 8 before described) the owner of any land deriving benefit from the said street shall (unless the Corporation otherwise agree with him), if and as soon as any such land shall be brought into rating for other than agricultural purposes, repay to the Corporation a contribution towards the cost not exceeding 3*l.* 10*s.* per yard of the frontage of his land to the said street, or (at the option of the Corporation) equal to such sum as may represent the degree of benefit accruing to his land whether fronting to or communicating with the said street from the construction of such street. The amount of such contribution in either case shall be assessed by the Surveyor for the time being of the Corporation, and approved of by them, and from their decision as to the amount or degree of benefit any owner may within two calendar months from such decision appeal to the Board or to an arbitrator mutually agreed upon. Cost of constructing streets.

(12)—(*a*) The Corporation shall maintain in a condition suitable for public traffic until constructed any of the new streets described in Clause 4 of this Scheme, the construction of which shall have been commenced by them within the meaning of Clause 5 of this Scheme, and which shall have been opened for public traffic. Maintenance of streets.

(*b*) Any streets constructed by the Corporation shall thereafter be maintained by them as public highways.

(*c*) Streets constructed otherwise than by the Corporation, if constructed in accordance with this Scheme to the satisfaction of the Corporation or their duly authorised officer, and subsequently made up and completed to the like satisfaction under any statutory enactment, shall, when, but unless otherwise agreed not till, they have to the extent of 75 per cent. of their total frontage been built up to or appropriated as curtilages for buildings in existence at the time, and the necessary services as referred to in Clause 6 of this Scheme have been laid, be taken over and thereafter maintained by the Corporation as public highways.

(*d*) For the purpose of this clause Section 59 of the Birmingham Corporation (Consolidation) Act, 1883, shall be suspended.

Grass margins, etc.

(13)—(*a*) In the case of any of the new streets described in Clause 4 of this Scheme the Corporation may plant bushes and shrubs therein and may erect guards or fences for the protection of such bushes and shrubs, and of any embankments and grass margins, and may thereafter maintain, alter, or renew the same and may take such steps as seem to them desirable to maintain all trees, bushes, shrubs, and grass margins in the streets in good order and condition.

Provided that the powers of the Corporation under this clause shall not be exercised, nor shall any bushes or shrubs so planted be continued, so as to hinder the reasonable use of the street by the public or any person entitled to use the same or so as to become a nuisance or injurious to any adjacent owner or occupier.

(*b*) In the case of any other street for the time being constructed in the area the Corporation may (subject to the last-mentioned proviso) require the person constructing the same to maintain in good order and condition until the street is taken over by the Corporation all trees and grass margins and embankments therein and to make and so maintain any proper guards and fences to the same.

(*c*) No communication shall be made across any grass

margin so as to afford access to any premises from any street at any time constructed in the area, except upon the same conditions as under Section 58 of the Birmingham Corporation Act, 1903, are applicable to communications across kerbed or paved footpaths, and for the purpose of this Scheme the provisions of that section (including the provisions relating to offences and penalties) shall apply and be read as if the words " or grass margin " were inserted in the section after the words " footpath " and " footway " wherever such words respectively occur.

Wilful damage.

(14) No person shall wilfully damage any tree, shrub, or plant or grass margin in any street, or any fence or guard erected therein.

Modification of streets.

(15) The Board may sanction any modification in detail with reference to the position, construction, or widening of any of the new streets described in Clause 4 of this Scheme, which at any time and from time to time may be agreed upon between the Corporation and the owner or owners interested.

Provided that no such sanction shall be given until the expiration of 21 days from the date on which notice has been first given by advertisement in some newspaper circulating in the City of Birmingham, to the effect that the Corporation have applied under the authority of this clause for the sanction of the Board to a modification described in the notice, and that any person objecting to such sanction being given may within such 21 days give written notice of his objection to the Board, who shall take any such objection into their consideration before granting any sanction as aforesaid.

Diversion or stopping up of highways.

(16) So much of the existing public footpath leading from Aston Church Road to Common Lane as lies between the points marked D, E and F on the Map A shall as from the date on which this scheme is approved by the Board, and so much of the existing public highway known as Hobmoor Road as extends from its junction with Street No. 10 to its junction with Street No. 12 shall as from, but not until, the date on which the portions of the said proposed new streets numbered 9, 10 and 12 as lie between the points marked A, B and C on the Map A, shall have been constructed to an

extent rendering them suitable for all traffic, and opened for public traffic, be deemed to be diverted or stopped up, and all public rights thereover shall cease as from such respective dates. The soil up to the middle line of such footpath or highway shall thereupon be deemed to vest in the owners of the freehold of the land abutting upon such footpath or highway, subject always to the rights of the Corporation and others being reserved in regard to sewers, gas and water mains, electric wires and other works, but the road materials on the footpath and highway diverted or stopped up may be removed by the Corporation, without payment, if they so desire within six months of such respective dates.

In the construction of the new streets referred to in this clause the Corporation shall (if required by the owner and at his expense) do all that may be necessary for transferring to the new street or for abandoning any sewers, gas or water pipes, electric wires, or other works lying in the highway to be diverted or stopped up, and shall provide proper service pipes from the mains in the new street to connect up with any property now or hereafter being served by any sewers, pipes, or works so transferred or abandoned. No such transfer or abandonment shall take place until notice shall have been given to any statutory undertakers affected, who may if they require do the necessary work themselves and charge the reasonable cost thereof against the Corporation, who may recover the same from the owner. Until any such work is completed the Corporation or other owner of any such pipes, sewers, or works shall have full access to, and the same powers with regard to, the same as they previously had.

Buildings.

Number of dwelling-houses and other buildings.

(17)—(*a*) In this clause "dwelling-houses" shall mean houses designed for occupation by not more than one family, together with such outbuildings as are reasonably required to be used or enjoyed therewith.

(*b*) In reckoning the number of dwelling-houses to be erected to an acre all roads and private open spaces constructed or to be constructed and set apart or to be set apart by the

owner of the lands in question, and half of the width of the highways repairable by the inhabitants at large upon which the said lands abut, shall be included in the measurement of the acre, but no account shall be taken of public open spaces acquired, otherwise than by gift subsequent to the making of this Scheme, or leased by the Corporation, or of the sites of the shops and other buildings mentioned in and approved under sub-clause (*c*) (iii) of this clause; and, subject to the provisions of this clause, an acre shall be measured so as to include such land as the Corporation in each case having regard to all the circumstances determine by the Order to be made under sub-clause (*c*) (iii) of this clause.

(*c*) The following provisions as to the dwelling-houses and other buildings which may be erected on land comprised within any of the areas coloured light grey, medium grey, and dark grey on the Map B shall have effect:—

(i) The number of dwelling-houses on any one acre shall not exceed twenty;

(ii) When a plan is submitted for the approval of the Corporation in regard to the erection of any building on any land comprised within one or more of the areas referred to which has not been previously made or included in a land unit under this clause, then,—

If at that time the owner of the land does not own any other land in the said areas which is not included in a land unit the land included in the building plan shall constitute a land unit for the purposes of this clause: Provided that if the land included in the building plan is comprised partly within more than one of the said areas, the part within each of the said areas shall constitute a land unit for the purposes of this clause.

If at that time the owner of the land owns other land in the said areas which is not included in a land unit there shall be submitted to the Corporation by the owner an estate plan in duplicate showing the whole of the land of such owner in the said areas but not included in a land unit, and

distinguishing the parts of the estate in each of the said areas; and the Corporation shall thereupon determine whether the land included in the building plan (or if such land is comprised partly within more than one of the said areas then the part thereof comprised in each of the said areas) shall constitute by itself a land unit or whether all or any part of the remaining land of such owner in the like area shall at that time, having regard to the effect of the development of the land included in the building plan (or part thereof as aforesaid), be added to the last-mentioned land to form a land unit, and shall show on each copy of the estate plan the land they determine shall form a land unit and return one copy of the plan to the owner.

For the purposes of this sub-clause (1) all the areas coloured light grey, (2) all the areas coloured medium grey and (3) all the areas coloured dark grey on the Map B shall together in each case be deemed to be one area.

(iii) The owner before commencing to erect any dwelling-house or other buildings on the land unit shall deposit with the Corporation a statement of the number and description of the dwelling-houses or other buildings which he desires to erect on the land unit, and subject to sub-clauses (*c*) (v) and (*d*) of this clause the Corporation shall as soon as practicable by Order sanction the maximum number of dwelling-houses which may be erected on the land unit, or on each acre or other portion of the land unit, and sanction the number and define the character or purposes of the other buildings to be erected thereon, but in no case shall the Corporation approve the erection of a greater or require the erection of a less number of dwelling-houses on the land unit than will give an average over the land unit of 12 to the acre if the land unit forms part of the areas coloured light grey, 15 to the acre if the land unit forms part of the areas

coloured medium grey, and 18 to the acre if the land unit forms part of the areas coloured dark grey on the Map B. The Corporation shall also include in the Order such further provision as may be necessary in pursuance of sub-clause (*b*) of this clause in regard to the measurement of the acre. Any such Order shall be forthwith communicated to the owner and shall, subject to any appeal as hereinafter provided, be binding on the owner and every successive owner of the land unit or any part thereof until revoked or altered, and no dwelling-houses or other buildings shall be erected on any land in the said areas in the absence or in contravention of any Order made under this clause, or when erected be used or adapted for purposes other than those defined; and the Corporation shall keep a register of such Orders, and a map showing all land units, which register and map shall be open to inspection by any person interested.

(iv) If, after any Order as aforesaid has been made, part of the land unit to which the Order relates is sold or let on building lease, and the Order only specifies the number of dwelling-houses which may be erected on the part of the land unit so sold or let together with the remainder of the land unit or some part thereof, the number of dwelling-houses to be erected on the part so sold or let and the part not so sold or let respectively shall, subject to the maximum number sanctioned by the Order of the Corporation not being exceeded and subject also to sub-clause (*c*) (i) of this clause, be a matter for agreement between the owners of the respective parts or be determined by the Corporation in default of such agreement.

The Corporation may at any time, on the application of any owner, review any such Order and by further Order revoke, alter, or amend the same, provided that the number of dwelling-houses on the land unit shall never be greater than will give an average over the unit of the number to the acre (12,

15 or 18 as the case may be) hereinbefore determined in respect of the unit, and any revocation, alteration, or amendment of the Order shall be registered, and be binding in like manner as aforesaid.

(v) By the consent of the Corporation, but not otherwise, such consent to be expressed by sanction as aforesaid in the Orders to be made under sub-clause (*c*) (iii) of this clause, there may be erected in the said areas such shops or buildings other than dwelling-houses as the Corporation may think fit. Provided always that such shops or buildings shall conform in all respects to the Acts and Byelaws in force for the time being in the area and applicable thereto. The Corporation before giving any such consent shall give public notice of their intention by advertisement in some local newspaper circulating in the City of Birmingham, and if no appeal against the giving of such consent shall be made to the Board under sub-clause (*d*) of this clause the Corporation may proceed to give such consent in manner aforesaid.

Any decision of the Corporation to withhold consent to the erection of shops or buildings other than dwelling-houses shall be communicated forthwith to the owner.

(*d*) Any person aggrieved by any determination of a land unit by the Corporation, or by any proposal to give or by any withholding of consent to the erection of shops or buildings other than dwelling-houses, or by any Order of the Corporation (except so far as it gives consent to the erection of shops or buildings other than dwelling-houses) under the foregoing provisions of this clause, may appeal to the Board within twenty-one days (1) after the determination shall have been communicated to the owner, or (2) after the date of the advertisement of a proposal to give consent as aforesaid or after the decision to withhold consent shall have been communicated to the owner, or (3) after the Order as aforesaid shall have been made and communicated to the owner, as the case may be; whereupon the Board, if they are satisfied that the

appellant is affected in regard to the matter appealed against, shall take the appeal into their consideration and make such Order as they may think just, and such Order shall be final and binding on all parties concerned.

(*e*) Except with the consent of the Corporation no dwelling-houses or buildings other than factories or workshops shall be erected on lands within the areas coloured pink on the Map B. If the Corporation on the application of an owner of any land comprised within those areas give such consent as aforesaid, the land in reference to which the consent shall have been given shall constitute a land unit for the purpose of this clause and the provisions of sub-clause (*c*) (i), (iii) and (iv) of this clause and of so much of sub-clause (*d*) of this clause as relates to an appeal against an Order of the Corporation shall apply in like manner as if the land unit formed part of the areas coloured medium grey on the said Map. Provided that any buildings erected on the said land shall conform in all respects to the Acts and Byelaws in force for the time being in the area and applicable thereto.

Breaks in building.

(18) Not more than eight dwelling-houses shall in any place be built under one continuous roof or without a break in building from the ground upwards. No part of any continuous block of more houses than four shall be built nearer to the owner's boundary than three feet. No break in building from the ground upwards shall be of less width than six feet: Provided that the Corporation may, if they think fit, allow a break in building to be of a width not less than four feet in a case where the break is between detached houses, or between a detached house or continuous block of houses and another continuous block of houses and neither block contains more than five dwelling-houses.

Air space.

(19) No building, wall, or erection of any kind shall be built or erected, and no addition shall be made to any building, wall, or erection, which (if built, erected or made) would be so situate that by reason of its proximity to or contact with any other buildings it would—

(*a*) Stop or impede ventilation, or would otherwise make or conduce to make such other buildings in a con-

dition unfit for human habitation or dangerous or injurious to health; or

(*b*) Prevent proper measures from being carried into effect for remedying any nuisance injurious to health or other evils complained of in respect of such other buildings.

Demolition or alteration of existing buildings.

(20) So far as may be necessary for carrying this Scheme into effect the Corporation may demolish or alter any buildings existing in the area at the date of the approval of the Scheme.

LANDS.

(21) The following lands shall be deemed to be set apart for the purpose of this Scheme, viz.:—

Lands set apart for purpose of Scheme.

For playing fields, public walks and pleasure grounds and river improvements.

(*a*) Parts of Enclosures Nos. 85, 86 and 87, as hatched and edged green on the Map A, for the purpose of playing fields. The lands on the east side of the area coloured light brown on Map A, for the purposes of public walks and pleasure grounds and of effecting improvements in connection with the River Cole. The Corporation shall have the like powers in regard to the said lands when acquired by the Corporation as if the same were acquired for the purposes of public walks and pleasure grounds under the Public Health Acts.

Street sites, etc.

(*b*) Any other lands which are shown on the Map A as set apart for the purpose of this Scheme, including the sites of the new streets described in Clause 4 of this Scheme and of any necessary slopes or accessory works in connection with such streets.

MISCELLANEOUS.

Factory sites.

(22) Except on the lands coloured pink on the Map B no factory or workshop shall be erected in the area except with the consent of the Corporation under Clause 17 (*c*) of this Scheme; and except on those lands no manufacturing business shall be carried on therein without such consent; but this prohibition shall not extend to the making and burning of bricks and tiles on land already used or appropriated for the purpose, or to any building now used as a factory or

workshop or to any manufacture now carried on in any such building.

Provided that any person feeling aggrieved by the withholding of any consent in regard to the matters mentioned in this clause may in any case in which an appeal is not provided for in Clause 17 of this Scheme appeal to the Board within twenty-one days after the decision to withhold consent shall have been communicated to the person or persons affected; whereupon the Board, if they are satisfied that the appellant is affected in regard to the matter appealed against, shall take the appeal into their consideration and make such Order as they may think just, and such Order shall be final and binding on all parties concerned.

Prohibition of advertisements.

(23) No person shall in the area erect, fix, place, or use or permit to be used in such a position or manner as to interfere with the amenity of the area or any part thereof any building, hoarding, framework, structure, or device for the purpose wholly or in part of advertising, but this prohibition shall not apply to the exhibition of traders' names on shops or factories, or to any notices exhibited on churches, chapels, or mission rooms.

Nuisances in gardens, etc.

(24) All private gardens, private open spaces, or private allotments shall be kept in such a state as not to be a nuisance or annoyance to neighbours or to persons using the highways. The Corporation may, on the report of their Surveyor, serve notice on any person or persons, whether individually or jointly occupying or using any such lands as aforesaid, or if the lands be unoccupied then the owner thereof, requiring that the nuisance or annoyance shall be abated within a reasonable time to be specified in such notice, and in default of compliance with such notice the Corporation may do what is necessary to abate the nuisance or annoyance, and may recover the cost from the person or persons served with the notice or from any one or more of them.

Adjustment of boundaries.

(25)—(*a*) It shall be lawful for the Corporation for the purpose of securing the proper laying out or development of any estate or lands within the area in respect of or in connection with which any of the new streets described in Clause 4 of

this Scheme are to be constructed, or any plans for any other new streets to be constructed in the area are submitted to the Corporation for approval, to require that provision shall be made for adjusting and altering the boundaries of any such estate or lands or any lands within the area adjacent or near thereto, and for effecting such exchanges of land as may be necessary or convenient for such purposes, and the provision to be so made and the terms and conditions upon which such provision is to be made shall, failing agreement between the Corporation and the respective persons interested in such estates or lands, on the application of the Corporation or any such person, be determined by an arbitrator to be appointed by the Board, and the Corporation may, for securing the execution of any such purposes, agree to pay, and may and shall pay to any such person or persons such sums as may be agreed upon or, in default of agreement, be determined by arbitration as aforesaid, provided that the payment of money by any such person shall not be made a term or condition of any award made under this clause otherwise than with his consent.

(*b*) Any award made under the provisions of this clause shall operate to effect any adjustment or alteration of boundaries or exchange of lands which may be provided for by such award, or be necessary for giving effect thereto, and shall be duly stamped accordingly, and the costs, charges, and expenses of any such arbitration shall, unless and except in so far as the award shall otherwise provide, be borne and paid by the Corporation.

(*c*) Any lands or moneys received by any person in or in respect of an adjustment or alteration of boundaries or exchange of lands under the provisions of this clause shall be held by such person, subject to the same trusts (if any), and any lands so received shall also be held subject to the same covenants, restrictions and conditions (if any) as the lands exchanged therefor.

(*d*) For the purpose of the adjustment or alteration of the boundaries of any such estate or lands as aforesaid, the Corporation may themselves purchase subject to the provisions of the Act of 1909 any land, and may sell or lease the same

in whole or in part at such time or times, at such price or prices, and on such conditions as they may think fit, or may appropriate the same for any public purpose approved by the Board, and until such sale or appropriation may occupy, manage, or let the same or any part thereof in such manner as the Corporation may think reasonable.

Claims for compensation or betterment.

(26) Claims under Section 58 of the Act of 1909 for compensation or in respect of any increase in value of property shall be made within twelve months from the date of the approval of this Scheme by the Board: Provided that in the case of any such claim arising under the provisions of Clause 7 (*b*) of this Scheme the claim shall be made within twelve months from the date of a requirement of the Corporation under that sub-clause, or in the event of an appeal against such requirement within twelve months from the date of the Order of the Petty Sessional Court or Court of Quarter Sessions on any such appeal.

Entry for inspection, etc.

(27)—(*a*) The Corporation or any of their officers or servants, on production of the written authority of the Corporation, shall be admitted into or upon any property in the area for the purpose of any inspection necessitated by the provisions of this Scheme or for the purpose of enforcing any of such provisions, at any time between the hours of 9 in the forenoon and 6 in the afternoon.

(*b*) If admission for any of the purposes of this clause is refused, any Justice, on complaint thereof on oath by any officer of the Corporation (made after reasonable notice in writing of the intention to make the same has been given to the person having custody of the property), may by order under his hand require such person to admit the Corporation and their officers and servants into or upon such property during the hours aforesaid, and if no person having such custody can be found the Justice shall, on oath made before him of that fact, authorise the Corporation and their officers and servants to enter such premises during the hours aforesaid.

(*c*) Any such order made by a Justice shall continue in force until the purposes for which such admittance was required shall have been fulfilled or executed.

Enforcement of Scheme.

(28) In addition to and notwithstanding any other procedure or remedy, any person committing or knowingly permitting any breach or non-observance of any of the conditions of this Scheme shall be guilty of an offence, and shall be liable on conviction in any Court of Summary Jurisdiction to a penalty not exceeding 40s. for each offence, and to a further penalty not exceeding 20s. for each day upon which any offence is continued after conviction or after notice in writing of the offence has been served by the Corporation or by any party interested on the party charged.

Works contravening Scheme.

(29)—(*a*) Where it appears to the Corporation that any building or other work in the area is at any time such as to contravene this Scheme, or that in the erection or carrying out of such building or other work any provision of this Scheme has not been complied with, or that any person has failed to execute any work which it is the duty of such person to execute under this Scheme and it appears to the Corporation that delay in the execution of the work would prejudice the efficient operation of this Scheme, the person by whom, at whose order, or on whose behalf such building shall have been erected, or such work shall have been begun or done, or the person who has failed to execute any work as aforesaid, shall (by a notice in writing signed by the Town Clerk and served upon such person, and containing a copy of Section 57 of the Act of 1909 and of this clause) be required on or before such day as shall be specified in such notice (not being less than one calendar month from the date of service of such notice), by a statement in writing under his hand or under the hand of an agent duly authorised in that behalf and served upon the Corporation, to show sufficient cause why such building or other work should not be removed, pulled down or altered, or be executed by the Corporation.

(*b*) If at the expiration of the notice such person shall have failed to show sufficient cause why such building or other work should not be removed, pulled down or altered, or (as the case may be) be executed by the Corporation, and it shall not have been notified to the Corporation by such person or by the Board that such person has referred any question to

the Board under sub-section (3) of Section 57 of the Act of 1909, the Corporation, after giving such person notice that at the expiration of a further period specified in the notice (not being less than 14 days from the date of service of such notice) they intend to exercise their powers under Section 57 of the Act of 1909, may proceed to remove, pull down or alter, or execute such building or work (as the case may be). Provided that a power proposed to be so exercised shall not be exercised pending the determination of any question referred to the Board under sub-section (3) of the said Section in relation to the building or other work in respect of which that power is proposed to be exercised, and of which reference the Corporation shall have received written notice within the last-mentioned period.

(*c*) When on any question referred to the Board under sub-section (3) of the said Section it is determined that any building or work contravenes this Scheme or that any provision of this Scheme is not complied with in the erection or carrying out of any such building or work, the Corporation, after giving such person as aforesaid notice that, at the expiration of a period specified in the notice (not being less than one calendar month from the date of service of such notice), they intend to exercise their powers under the said Section, may proceed to remove, pull down or alter any such building or work.

Agreements.

(30) The Corporation may, subject to the approval of the Board, make any agreements they think fit with any person or persons for the purpose of carrying out this Scheme or any part thereof or any adjustment in connection therewith. Any provision in any such agreements shall be void if inconsistent with this Scheme, but otherwise all such agreements shall have full force and effect and shall be deemed to apply to and bind all persons parties to such agreements and all successors in title to such persons.

Suspension and application of acts and bye-laws.

(31)—(*a*) So far as necessary for the proper carrying out of this Scheme—

(1) The following enactments contained in public general Act shall be suspended in the area, namely :—

The Highway Act, 1835, in regard to the stopping up and diversion of highways, so far as regards the highways referred to in Clause 16 of this Scheme; and

Section 41 of the Public Health Acts (Amendment) Act, 1890, if and so far as the same is in force in the area;

(2) All other statutory enactments, not being contained in a public general Act, and all bye-laws, regulations, or other provisions under whatever authority made, which are in operation in the area, shall be suspended.

(*b*) Except as aforesaid and subject to the provisions of this Scheme all statutory enactments, bye-laws, regulations, or other provisions which are in operation in the area shall continue to be in full force therein, and nothing in this Scheme shall prevent the adoption or putting in force at any time in the area of any adoptive Act or of any part thereof, or the making of new bye-laws to apply therein. Provided that the adoption or putting in force of such Act and the making of such bye-laws shall have been confirmed and sanctioned as required by law.

(*c*) For the purposes of this Scheme Sections 8, 9 and 276 of the Birmingham Corporation (Consolidation) Act, 1883, shall be deemed to apply.

Disposal or appropriation of lands.

(32) Whenever in the area the Corporation may acquire any land under or for the purposes of this Scheme the Corporation may dispose of any part of such land not required for that purpose, or may apply such land not so required, or any part thereof, to some other purpose approved by the Board.

Recovery of expenses by Corporation from owners.

(33)—(*a*) Where the Corporation have incurred expenses for the repayment whereof the owner of the premises deriving benefit therefrom or for or in respect of which the same shall have been incurred, is made liable under this Scheme or the Act of 1909, or by any agreement with the Corporation, such expenditure may be recovered in a Court of Summary Jurisdiction, together with interest at a rate not exceeding £5 per centum per annum from the date of service of a demand for the same till payment thereof from any person

who is the owner of such premises when the works are completed for which such expenses have been incurred, and until recovery of such expenses and interest the same shall be a charge on the premises deriving benefit therefrom, or for or in respect of which they were incurred. In all summary proceedings by the Corporation for the recovery of any such expenses the time within which such proceedings may be taken shall be reckoned from the date of the service of notice of demand.

(*b*) The Corporation may by Order declare any such expenses to be payable by annual instalments within a period not exceeding 30 years, with interest at a rate not exceeding £5 per centum per annum from the date of the service of notice of demand until the whole amount is paid, and any such instalments and interest or any part thereof may be recovered in a summary manner from the owner for the time being of such premises, and may be deducted from the rent of such premises in the same proportions as are allowed in the case of private improvement rates under the Public Health Act, 1875.

(*c*) The Corporation, if they think fit, from time to time (in addition and without prejudice to any other remedy) may recover in a Court of Summary Jurisdiction or as a simple contract debt by action in any Court of competent jurisdiction from the owner for the time being of any such premises the whole or any portion of any such expenses and interest.

(*d*) Any expenses incurred by the Corporation under Section 57 of the Act of 1909 which are not expenses recoverable as hereinbefore provided, may be recovered by the Corporation in any Court of Summary Jurisdiction, or as a simple contract debt by action in any Court of competent jurisdiction, from the person by whom, at whose order, or on whose behalf, any building or other work contravening this Scheme shall have been erected or done, or whose duty it was to execute the work executed by the Corporation.

(*e*) Where the value of any land is increased by the making of this Scheme, the sum lawfully required to be paid in respect of that increase shall, until payment, be a charge on the in- Recovery of betterment.

heritance of such land, and such sum may if required to be paid otherwise than by instalments be dealt with and recovered in the same way that expenses may be dealt with and recovered under this clause, or if required to be paid by instalments, any arrears of such instalments may be dealt with and recovered in the same way as instalments of expenses in arrear may be dealt with and recovered under this clause.

Appeal to Petty Sessional Court.

(34)—(*a*) Any person deeming himself aggrieved by—

(1) Any delay of the Corporation in regard to commencing or completely constructing new streets as to which it is indicated in Clause 5 or Clause 6 of this Scheme that there may be an appeal;

(2) Any requirement of the Corporation under sub-clause (*b*) of Clause 7 of this Scheme;

(3) Any delay of the Corporation in giving any approval referred to in sub-clauses (*b*) and (*d*) of Clause 7 of this Scheme;

may (in the case of an appeal against delay) after giving one calendar month's notice to the Corporation of his intention to appeal, or (in the case of an appeal against any requirement) within two calendar months from the date of such requirement, appeal to a Petty Sessional Court, and such Court may and is hereby empowered to make such order in the premises and on such terms and conditions as to the Court shall seem just.

(*b*) The costs of any such appeal shall be paid in such manner and by such parties to the appeal as the Petty Sessional Court may direct.

Appeal to Quarter Sessions.

(35) Any person deeming himself aggrieved by any conviction or order made by a Petty Sessional Court under or pursuant to the provisions of this Scheme may, if no other mode of appeal is provided by this Scheme or any Act of Parliament, appeal to the next practicable Court of Quarter Sessions under and according to the provisions of the Summary Jurisdiction Acts and in regard to any such Order made by a Petty Sessional Court, the Corporation may in like manner appeal, and the Court of Quarter Sessions shall accordingly be, and are hereby, empowered to deal with any such appeal as if it were an ordinary appeal under those Acts.

(36) All amounts recovered by the Corporation under Section 58 of the Act of 1909 in respect of the increase in value of property or received from owners as contributions towards the cost of street construction or from the sale of surplus lands or from any other source in connection with this Scheme, shall be applied in repayment of moneys borrowed under the Act of 1909 for purposes of this Scheme or to such other purposes as may be approved by the Board. Accounts.

(37) Notices under this Scheme must be in writing, and may be served on the Corporation by being delivered addressed to the Town Clerk at his office, or on owners or occupiers by being sent by post addressed to them respectively, or to their respective agents, at the last known place of abode or business of such owners, occupiers, or agents. Notices.

(38) Section 85 of the Housing of the Working Classes Act, 1890, as amended by the Act of 1909, shall apply for any purposes of this Scheme as it applies for the purpose of the execution of the powers and duties of the Board under the former Act. Inquiries by Local Government Board.

(39) In all cases where the consent of the Corporation is required to be given under this Scheme, such consent shall be in writing and shall be either under the hand of the Town Clerk or the Seal of the Corporation. Consent of Corporation to be in writing.

(40) Any general provisions which may hereafter be made by the Board under Section 55 of the Act of 1909 shall be excluded from taking effect as part of this Scheme. Exclusion of "general provisions."

(41) Nothing in this Scheme contained shall be deemed to affect the user by a Railway Company for the purposes of their undertaking, other than the erection of dwelling-houses, of any lands owned by the Company at the date of the approval of the Scheme; but, in the event of such lands being disposed of by the Company or being used or proposed to be used for the erection of dwelling-houses, or being developed or proposed to be developed in a manner inconsistent with the use of the same for the purposes of the undertaking of the Company, any provisions of this Scheme which would but for this Clause affect the user of such lands shall thereupon apply to such lands: Provided that nothing in this Protection to Railway Companies.

clause shall affect the construction of any street referred to in Clause 4 of this Scheme or shall prevent the provisions of Clauses 19 and 23 of this Scheme from applying to lands of a Railway Company.

Duration of Scheme and Short Title.

(42) This Scheme shall commence on the day on which it is approved by the Board, and shall continue in operation until varied by any subsequent Scheme, and may be cited as "The East Birmingham Town Planning Scheme."

Given under the Seal of Office of the Local Government Board, this Eighteenth day of August, in the year One thousand nine hundred and thirteen.

JOHN BURNS,
President.

WALTER T. JERRED,
Assistant Secretary.

On behalf of the Local Government Board it is hereby certified—

(1) that notice of the intention of the Board to approve the Scheme referred to in the foregoing Order as modified and set out in the Schedule to the Order was published in the London Gazette and that objections were made thereto by certain persons interested within twenty-one days from the date of such publication; and

(2) that a draft of the Scheme was laid before each House of Parliament for the periods specified in Section 54 (4) and Section 55 (2) of the Housing, Town Planning, &c. Act, 1909, during the Session of Parliament and that no action was taken thereon by either House.

As witness my hand this 18th day of August, 1913.

WALTER T. JERRED,
Assistant Secretary.

Acting on behalf of the Local Government Board under the authority of their General Order dated the 26th day of May, 1877.

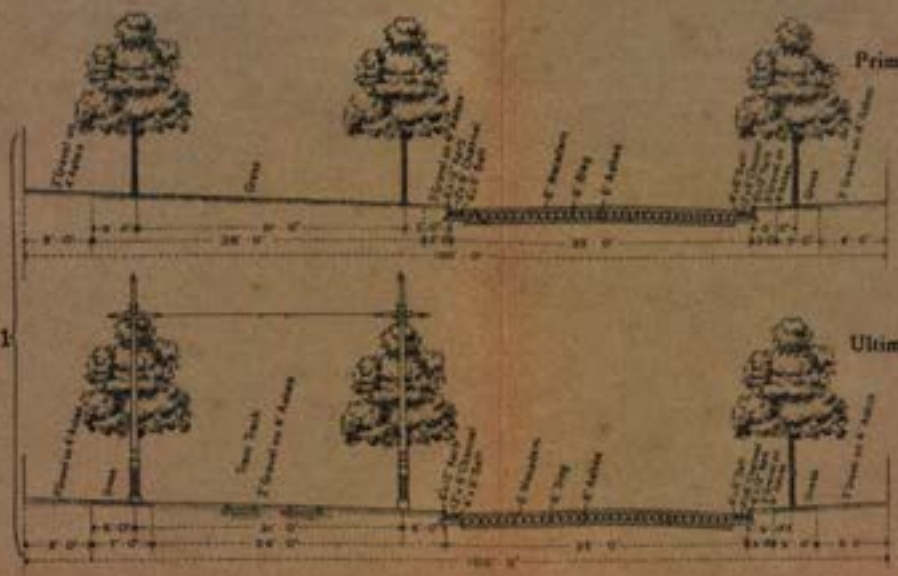
Sheet A. EAST BIRMINGHAM TOWN PLANNING SCHEME. PLATE IV.

STREET CROSS-SECTIONS.

Primary Section

Section A1

Ultimate Section.



Section A2.

Section A3.

Note.—When a street constructed in accordance with Section A3 is on an embankment it shall have an additional width of 2' 0" of earthwork beyond the boundary fences on each side, making a total width of 62' 0", as indicated by dotted lines on the diagram section.

Section A4.

Section A5.

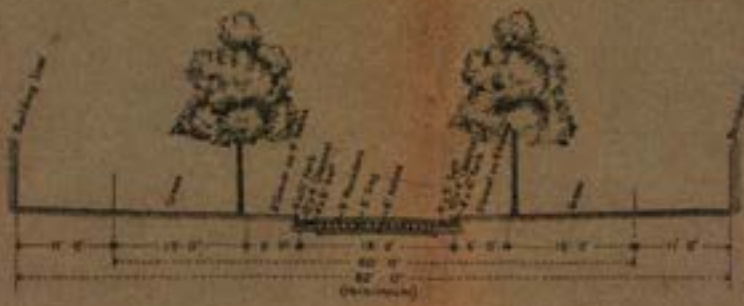
EAST BIRMINGHAM TOWN PLANNING SCHEME.

PLATE V.

STREET CROSS-SECTIONS.

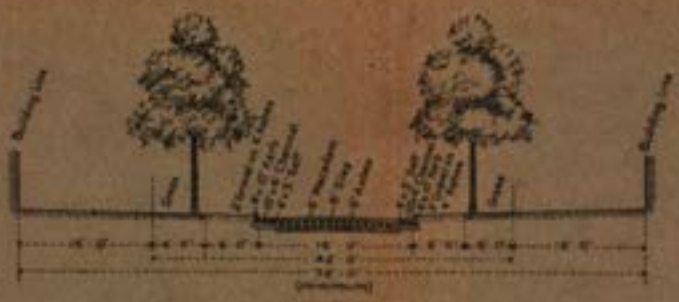
Sheet B.

Section B1.



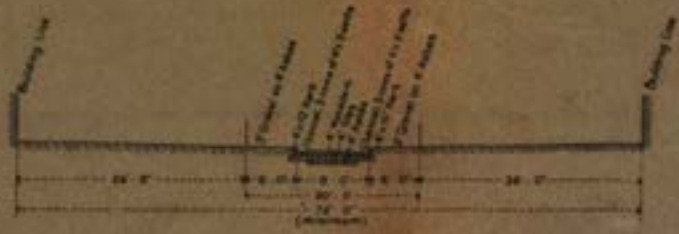
Section B2.

Section B3.



Section B4.

Section B5.



PART II.

TOWN PLANNING.

Preparation and approval of town planning scheme.

54.—(1) A town planning scheme may be made in accordance with the provisions of this Part of this Act as respects any land which is in course of development or appears likely to be used for building purposes, with the general object of securing proper sanitary conditions, amenity, and convenience in connection with the laying out and use of the land, and of any neighbouring lands.

(2) The Local Government Board may authorise a local authority within the meaning of this Part of this Act to prepare such a town planning scheme with reference to any land within or in the neighbourhood of their area, if the authority satisfy the Board that there is a prima facie case for making such a scheme, or may authorise a local authority to adopt, with or without any modifications, any such scheme proposed by all or any of the owners of any land with respect to which the local authority might themselves have been authorised to prepare a scheme.

(3) Where it is made to appear to the Local Government Board that a piece of land already built upon, or a piece of land not likely to be used for building purposes, is so situated with respect to any land likely to be used for building purposes that it ought to be included in any town planning scheme made with respect to the last-mentioned land, the Board may authorise the preparation or adoption of a scheme including such piece of land as aforesaid, and providing for

the demolition or alteration of any buildings thereon so far as may be necessary for carrying the scheme into effect.

(4) A town planning scheme prepared or adopted by a local authority shall not have effect, unless it is approved by order of the Local Government Board, and the Board may refuse to approve any scheme except with such modifications and subject to such conditions as they think fit to impose:

Provided that, before a town planning scheme is approved by the Local Government Board, notice of their intention to do so shall be published in the London or Edinburgh Gazette, as the case may be, and, if within twenty-one days from the date of such publication any person or authority interested objects in the prescribed manner, the draft of the order shall be laid before each House of Parliament, for a period of not less than thirty days during the Session of Parliament, and, if either of those Houses before the expiration of those thirty days presents an address to His Majesty against the draft, or any part thereof, no further proceedings shall be taken thereon, without prejudice to the making of any new draft scheme.

(5) A town planning scheme, when approved by the Local Government Board, shall have effect as if it were enacted in this Act.

(6) A town planning scheme may be varied or revoked by a subsequent scheme prepared or adopted and approved in accordance with this Part of this Act, and the Local Government Board, on the application of the responsible authority, or of any other person appearing to them to be interested, may by order revoke a town planning scheme if they think that under the special circumstances of the case the scheme should be so revoked.

(7) The expression "land likely to be used for building purposes" shall include any land likely to be used as, or for the purpose of providing, open spaces, roads, streets, parks, pleasure or recreation grounds, or for the purpose of executing any work upon or under the land incidental to a town planning scheme, whether in the nature of a building work or not, and

the decision of the Local Government Board, whether land is likely to be used for building purposes or not, shall be final.

Contents of town planning schemes.

55.—(1) The Local Government Board may prescribe a set of general provisions (or separate sets of general provisions adapted for areas of any special character) for carrying out the general objects of town planning schemes, and in particular for dealing with the matters set out in the Fourth Schedule to this Act, and the general provisions, or set of general provisions appropriate to the area for which a town planning scheme is made, shall take effect as part of every scheme, except so far as provision is made by the scheme as approved by the Board for the variation or exclusion of any of those provisions.

(2) Special provisions shall in addition be inserted in every town planning scheme defining in such manner as may be prescribed by regulations under this Part of this Act the area to which the scheme is to apply, and the authority who are to be responsible for enforcing the observance of the scheme, and for the execution of any works which under the scheme or this Part of this Act are to be executed by a local authority (in this Part of this Act referred to as the responsible authority), and providing for any matters which may be dealt with by general provisions, and otherwise supplementing, excluding, or varying the general provisions, and also for dealing with any special circumstances or contingencies for which adequate provision is not made by the general provisions, and for suspending, so far as necessary for the proper carrying out of the scheme, any statutory enactments, byelaws, regulations, or other provisions, under whatever authority made, which are in operation in the area included in the scheme:

Provided that, where the scheme contains provisions suspending any enactment contained in a public general Act, the scheme shall not come into force unless a draft thereof has been laid before each House of Parliament for a period of not less than forty days during the session of Parliament, and,

if either of those Houses before the expiration of those forty days presents an Address to His Majesty against the proposed suspension no further proceedings shall be taken on the draft, without prejudice to the making of any new scheme.

(3) Where land included in a town planning scheme is in the area of more than one local authority, or is in the area of a local authority by whom the scheme was not prepared, the responsible authority may be one of those local authorities, or for certain purposes of the scheme one local authority and for certain purposes another local authority, or a joint body constituted specially for the purpose by the scheme, and all necessary provisions may be made by the scheme for constituting the joint body and giving them the necessary powers and duties:

Provided that, except with the consent of the London County Council, no other local authority shall, as respects any land in the county of London, prepare or be responsible for enforcing the observance of a town planning scheme under this Part of this Act, or for the execution of any works which under the scheme or this Part of this Act are to be executed by a local authority.

Procedure regulations of the Local Government Board.

56.—(1) The Local Government Board may make regulations for regulating generally the procedure to be adopted with respect to applications for authority to prepare or adopt a town planning scheme, the preparation of the scheme, obtaining the approval of the Board to a scheme so prepared or adopted, and any inquiries, reports, notices, or other matters required in connection with the preparation or adoption or the approval of the scheme or preliminary thereto, or in relation to the carrying out of the scheme or enforcing the observance of the provisions thereof.

(2) Provision shall be made by those regulations—

(*a*) for securing co-operation on the part of the local authority with the owners and other persons interested in the land proposed to be included in the scheme at every stage of the proceedings, by means

of conferences and such other means as may be provided by the regulations;

(*b*) for securing that notice of the proposal to prepare or adopt the scheme should be given at the earliest stage possible to any council interested in the land; and

(*c*) for dealing with the other matters mentioned in the Fifth Schedule to this Act.

Power to enforce scheme.

57.—(1) The responsible authority may at any time, after giving such notice as may be provided by a town planning scheme and in accordance with the provisions of the scheme—

(*a*) remove, pull down, or alter any building or other work in the area included in the scheme which is such as to contravene the scheme, or in the erection or carrying out of which any provision of the scheme has not been complied with; or

(*b*) execute any work which it is the duty of any person to execute under the scheme in any case where it appears to the authority that delay in the execution of the work would prejudice the efficient operation of the scheme.

(2) Any expenses incurred by a responsible authority under this section may be recovered from the persons in default in such manner and subject to such conditions as may be provided by the scheme.

(3) If any question arises whether any building or work contravenes a town planning scheme, or whether any provision of a town planning scheme is not complied with in the erection or carrying out of any such building or work, that question shall be referred to the Local Government Board, and shall, unless the parties otherwise agree, be determined by the Board as arbitrators, and the decision of the Board shall be final and conclusive and binding on all persons.

Compensation in respect of property injuriously affected by scheme, &c.

58.—(1) Any person whose property is injuriously affected by the making of a town planning scheme shall, if he makes a claim for the purpose within the time (if any) limited by the scheme, not being less than three months after the date when notice of the approval of the scheme is published in the manner prescribed by regulations made by the Local Government Board, be entitled to obtain compensation in respect thereof from the responsible authority.

(2) A person shall not be entitled to obtain compensation under this section on account of any building erected on, or contract made or other thing done with respect to, land included in a scheme, after the time at which the application for authority to prepare the scheme was made, or after such other time as the Local Government Board may fix for the purpose:

Provided that this provision shall not apply as respects any work done before the date of the approval of the scheme for the purpose of finishing a building begun or of carrying out a contract entered into before the application was made.

(3) Where, by the making of any town planning scheme, any property is increased in value, the responsible authority, if they make a claim for the purpose within the time (if any) limited by the scheme (not being less than three months after the date when notice of the approval of the scheme is first published in the manner prescribed by regulations made by the Local Government Board), shall be entitled to recover from any person whose property is so increased in value one-half of the amount of that increase.

(4) Any question as to whether any property is injuriously affected or increased in value within the meaning of this section, and as to the amount and manner of payment (whether by instalments or otherwise) of the sum which is to be paid as compensation under this section or which the responsible authority are entitled to recover from a person whose property is increased in value, shall be determined by the arbitration of a single arbitrator appointed by the Local Government Board, unless the parties agree on some other method of determination.

(5) Any amount due under this section as compensation to a person aggrieved from a responsible authority, or to a responsible authority from a person whose property is increased in value, may be recovered summarily as a civil debt.

(6) Where a town planning scheme is revoked by an order of the Local Government Board under this Act, any person who has incurred expenditure for the purpose of complying with the scheme shall be entitled to compensation in accordance with this section in so far as any such expenditure is rendered abortive by reason of the revocation of the scheme.

Exclusion or limitation of compensation in certain cases.

59.—(1) Where property is alleged to be injuriously affected by reason of any provisions contained in a town planning scheme, no compensation shall be paid in respect thereof if or so far as the provisions are such as would have been enforceable if they had been contained in byelaws made by the local authority.

(2) Property shall not be deemed to be injuriously affected by reason of the making of any provisions inserted in a town planning scheme, which, with a view to securing the amenity of the area included in the scheme or any part thereof, prescribe the space about buildings or limit the number of buildings to be erected, or prescribe the height or character of buildings, and which the Local Government Board, having regard to the nature and situation of the land affected by the provisions, consider reasonable for the purpose.

(3) Where a person is entitled to compensation under this Part of this Act in respect of any matter or thing, and he would be entitled to compensation in respect of the same matter or thing under any other enactment, he shall not be entitled to compensation in respect of that matter or thing both under this Act and under that other enactment, and shall not be entitled to any greater compensation under this Act than he would be entitled to under the other enactment.

Acquisition by local authorities of land comprised in a scheme.

60.—(1) The responsible authority may, for the purpose of a town planning scheme, purchase any land comprised in such scheme by agreement, or be authorised to purchase any such land compulsorily in the same manner and subject to the same provisions (including any provision authorising the

Local Government Board to give directions as to the payment and application of any purchase money or compensation) as a local authority may purchase or be authorised to purchase land situate in an urban district for the purposes of Part III. of the Housing of the Working Classes Act, 1890, as amended by sections two and forty-five of this Act.

(2) Where land included within the area of a local authority is comprised in a town planning scheme, and the localauthority are not the responsible authority, the local authority may purchase or be authorised to purchase that land in the same manner as the responsible authority.

Powers of Local Government Board in case of default of local authority to make or execute town planning scheme.

61.—(1) If the Local Government Board are satisfied on any representation, after holding a public local inquiry, that a local authority—

(*a*) have failed to take the requisite steps for having a satisfactory town planning scheme prepared and approved in a case where a town planning scheme ought to be made; or

(*b*) have failed to adopt any scheme proposed by owners of any land in a case where the scheme ought to be adopted; or

(*c*) have unreasonably refused to consent to any modifications or conditions imposed by the Board;

the Board may, as the case requires, order the local authority to prepare and submit for the approval of the Board such a town planning scheme, or to adopt the scheme, or to consent to the modifications or conditions so inserted:

Provided that, where the representation is that a local authority have failed to adopt a scheme, the Local Government Board, in lieu of making such an order as aforesaid, may approve the proposed scheme, subject to such modifications or conditions, if any, as the Board think fit, and thereupon the scheme shall have effect as if it had been adopted by the local authority and approved by the Board.

(2) If the Local Government Board are satisfied on any representation, after holding a local inquiry, that a responsible authority have failed to enforce effectively the observance of a scheme which has been confirmed, or any provisions thereof

or to execute any works which under the scheme or this Part of this Act the authority is required to execute, the Board may order that authority to do all things necessary for enforcing the observance of the scheme or any provisions thereof effectively, or for executing any works which under the scheme or this Part of this Act the authority is required to execute.

(3) Any order under this section may be enforced by mandamus.

Determination of matters by Local Government Board.

62. Where the Local Government Board are authorised by this Part of this Act or any scheme made thereunder to determine any matter, it shall, except as otherwise expressly provided by this Part of this Act, be at their option to determine the matter as arbitrators or otherwise, and, if they elect or are required to determine the matter as arbitrators, the provisions of the Regulation of Railways Act, 1868, respecting arbitrations by the Board of Trade, and the enactments amending those provisions, shall apply as if they were herein re-enacted and in terms made applicable to the Local Government Board and the determination of the matters aforesaid.

31 & 32 Vict. c. 119.

Inquiries by Local Government Board.

63. Section eighty-five of the Housing of the Working Classes Act, 1890 (which relates to inquiries by the Local Government Board), as amended by this Act, shall apply for any purposes of this Part of this Act as it applies for the purpose of the execution of the powers and duties of the Local Government Board under that Act.

Laying general provisions before Parliament.

64. All general provisions made under this Part of this Act shall be laid as soon as may be before Parliament, and the Rules Publication Act, 1893, shall apply to such provisions as if they were statutory rules within the meaning of section one of that Act.

56 & 57 Vict. c. 66.

Definition of local authority, and expenses.

65.—(1) For the purposes of this Part of this Act the expression "local authority" means the council of any borough or urban or rural district.

(2) Any expenses incurred by a local authority under this Part of this Act, or any scheme made thereunder, shall be

defrayed as expenses of the authority under the Public Health Acts, and the authority may borrow, for the purposes of this Part of this Act, or any scheme made thereunder, in the same manner and subject to the same provisions as they may borrow for the purposes of the Public Health Acts.

(3) Money borrowed for the purposes of this Part of this Act, or any scheme made thereunder, shall not be reckoned as part of the debt of a borough or urban district for the purposes of the limitation on borrowing under sub-sections (2) and (3) of section two hundred and thirty-four of the Public Health Act, 1875.

Application to London.

66.—(1) This Part of this Act shall apply to the administrative county of London, and, as respects that county, the London County Council shall be the local authority.

(2) Any expenses incurred by the London County Council shall be defrayed out of the general county rate and any money may be borrowed by the Council in the same manner as money may be borrowed for general county purposes.

Application of Part II. to Scotland.

67. This Part of this Act shall apply to Scotland subject to the following modifications :—

(1) The Local Government Board for Scotland (hereinafter referred to as the Board) shall be substituted for the Local Government Board, and shall for the purposes of this Part of this Act have the same powers of local inquiry as for the purposes of the Housing Acts as defined in Part I. of this Act.

(2) Sub-section (1) and sub-section (3) of the section of this Part of this Act which relates to the definition of local authority and expenses shall not apply.

(3) The local authority and the area of such authority for the purposes of this Part of this Act shall respectively be the local authority for the purposes of the Housing Acts as defined in Part I. of this Act, and the district of that authority.

(4) References to the Public Health Acts shall be construed

as references to the Housing Acts as defined in Part I. of this Act.

(5) Any local rate for the purposes of this Part of this Act (including the purposes of any loan) shall not be reckoned in any calculation as to the statutory limit of the public health general assessment.

(6) The Board shall not themselves make an order under section sixty-one of this Act on any authority, but in lieu thereof it shall be lawful for the Board, after holding a local inquiry at which the authority shall have had an opportunity of being heard, and with the approval of the Lord Advocate, to apply for such an order by summary petition to either Division of the Court of Session, or during vacation or recess to the Lord Ordinary on the Bills, which Division or Lord Ordinary are hereby authorised and directed to do therein and to dispose of the expenses of the proceedings as to the said Division or Lord Ordinary shall appear to be just.

(7) In any proceedings under this Part of this Act the Board shall have regard to the powers and jurisdiction of the dean of guild court in burghs.

(8) The provision respecting the Rules Publication Act, 1893, shall have effect as if section one of that Act applied to Scotland, with the substitution of the "Edinburgh Gazette" for the "London Gazette."

PART IV.

SUPPLEMENTAL.

Provisions as to commons and open spaces.

73.—(1) Where any scheme or order under the Housing Acts or Part II. of this Act authorises the acquisition or appropriation to any other purpose of any land forming part of any common, open space, or allotment, the scheme or order, so far as it relates to the acquisition or appropriation of such land, shall be provisional only, and shall not have effect unless and until it is confirmed by Parliament, except where the scheme or order provides for giving in exchange for such land other land, not being less in area, certified by the Local Government Board after consultation with the Board of Agriculture and Fisheries to be equally advantageous to the persons, if any, entitled to commonable or other rights and to the public.

(2) Before giving any such certificate the Board shall give public notice of the proposed exchange, and shall afford opportunities to all persons interested to make representations and objections in relation thereto, and shall, if necessary, hold a local inquiry on the subject.

(3) Where any such scheme or order authorises such an exchange, the scheme or order shall provide for vesting the land given in exchange in the persons in whom the common or open space was vested, subject to the same rights, trusts, and incidents as attached to the common or open space, and for discharging the part of the common, open space, or allotment acquired or appropriated from all rights, trusts, and incidents to which it was previously subject.

(4) For the purposes of this Act the expression "common" shall include any land subject to be enclosed under the Inclosure Acts, 1845 to 1882, and any town or village green; the expression "open space" means any land laid out as a public garden or used for the purposes of public recreation,

and any disused burial ground; and the expression "allotment" means any allotment set out as a fuel allotment or a field garden allotment under an Inclosure Act.

Provision as to land in neighbourhood of royal palaces or parks.

74.—(1) Where any land proposed to be included in any scheme or order to be made under the Housing Acts or Part II. of this Act, or any land proposed to be acquired under the Housing Acts or Part II. of this Act, is situate within the prescribed distance from any of the royal palaces or parks, the local authority shall, before preparing the scheme or order or acquiring the land, communicate with the Commissioners of Works, and the Local Government Board shall, before confirming the scheme or order or authorising the acquisition of the land or the raising of any loan for the purpose, take into consideration any recommendations they may have received from the Commissioners of Works with reference to the proposal.

(2) For the purposes of this section "prescribed" means prescribed by regulations made by the Local Government Board after consultation with the Commissioners of Works.

Section 55.

FOURTH SCHEDULE.

MATTERS TO BE DEALT WITH BY GENERAL PROVISIONS PRESCRIBED BY THE LOCAL GOVERNMENT BOARD.

1. Streets, roads, and other ways, and stopping up, or diversion of existing highways.

2. Buildings, structures, and erections.

3. Open spaces, private and public.

4. The preservation of objects of historical interest or natural beauty.

5. Sewerage, drainage, and sewage disposal.

6. Lighting.

7. Water supply.

8. Ancillary or consequential works.

9. Extinction or variation of private rights of way and other easements.

10. Dealing with or disposal of land acquired by the responsible authority or by a local authority.

11. Power of entry and inspection.

12. Power of the responsible authority to remove, alter, or demolish any obstructive work.

13. Power of the responsible authority to make agreements with owners, and of owners to make agreements with one another.

14. Power of the responsible authority or a local authority to accept any money or property for the furtherance of the object of any town planning scheme, and provision for regulating the administration of any such money or property and for the exemption of any assurance with respect to money or property so accepted from enrolment under the Mortmain and Charitable Uses Act, 1888.

15. Application with the necessary modifications and adaptations of statutory enactments.

16. Carrying out and supplementing the provisions of this Act for enforcing schemes.

17. Limitation of time for operation of scheme.

18. Co-operation of the responsible authority with the owners of land included in the scheme or other persons interested by means of conferences, &c.

19. Charging on the inheritance of any land the value of which is increased by the operation of a town-planning scheme the sum required to be paid in respect of that increase, and for that purpose applying, with the necessary adaptations, the provisions of any enactments dealing with charges for improvements of land.

FIFTH SCHEDULE.

Section 56.

1. Procedure anterior to and for the purpose of an application for authority to prepare or adopt a scheme :—

(*a*) Submission of plans and estimates.

(*b*) Publication of notices.

2. Procedure during, on, and after the preparation or adoption and before the approval of the scheme :—

(*a*) Submission to the Local Government Board of the proposed scheme, with plans and estimates.

(*b*) Notice of submission of proposed scheme to the Local Government Board.

(*c*) Hearing of objections and representations by persons affected, including persons representing architectural or archæological societies or otherwise interested in the amenity of the proposed scheme.

(*d*) Publication of notice of intention to approve scheme and the lodging of objections thereto.

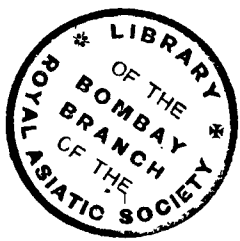
3. Procedure after the approval of the scheme :—

(*a*) Notice to be given of approval of scheme.

(*b*) Inquiries and reports as to the beginning and the progress and completion of works, and other action under the scheme.

4. Duty, at any stage, of the local authority to publish or deposit for inspection any scheme or proposed scheme, and the plans relating thereto, and to give information to persons affected with reference to any such scheme or proposed scheme.

5. The details to be specified in plans, including, wherever the circumstances so require, the restrictions on the number of buildings which may be erected on each acre, and the height and character of those buildings.


LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

INDEX

A

Acre, net and gross, 97
Advertisements, 58
Agreements, 42
Allocation of sites, 72
Allotments, 88, 113
Area, selection of, 38
Aston Manor, 23, 24, 26, 27

B

Berlin, 102
Birches Green estate, 88
Birmingham—
  Areas available, 23, 26
  Back-to-back houses, 3
  Mortality rate, 4
  Population, 24
  Public Health Acts, 124
  Sickness rate, 4
  Street widenings, 16
  Town Planning schemes, 23, 28
  Water supply, 28
Boston traffic problem, 18
Boundaries of schemes, 44
Bournville, 25, 119
Bromsgrove, 36
Building lines, 70

C

Chicago, 82
Children, effect of slums on, 5
Compounding limit, 116
Conferences with owners, 49
Consumption, 9
Control, necessity of, 19
Cost of rehousing, 8
Cost of removing slums, 8
Cost of schemes, 45
Cost of street widenings, 16
Crime and overcrowding, 6
Croydon, 127

D

Development, alternative, 12, 106
Development, cost of estate, 103, 106
Dwelling-houses, 96

E

East Birmingham scheme, 32, 99
Edgbaston, 24
Edgbaston, Harborne, and Quinton scheme, 30, 99
Erdington, 23, 24, 26, 27
Estate plans, 71

F

Factories, 17, 72
  Health of, 131
Frankfort factory area, 17, 76
  Land re-distribution, 147
  Park belt, 17

G

Gardens, 113
  Economic effect of, 118
General Survey, 43
German Town Planning, 20
Grass margins, 66

H

Handsworth, 23, 24, 26, 27
Harborne tenants, 25
Housing conditions, 2

I

Infantile mortality rate, 4, 123, 127
Insurance Act, 126

K

King's Norton, 23, 24, 26, 27

L

Land excluded from schemes, 44
  Ownership by municipalities, 140, 143
  Price of, 102, 150
Land likely to be used for building purposes, 40
Letchworth, 20, 78, 143
Limitation of number of houses, 12, 35, 91
  Effect on rateable value, 111
Liverpool overcrowding, 3
  Crime, 6
  Cost of rehousing, 8
  Effect of rehousing, 128
London, cost of clearance schemes, 8

M

Manchester, cost of clearance schemes, 8
  Street widenings, 67
Mannheim, 76
Maps for schemes, 48, 50, 58
Mortality rate, 4, 9, 123
Motors, increase in, 16

N

Neighbouring authorities, 33, 40
North Bromsgrove scheme, 36
North Yardley scheme, 33
Notices, 56

O

Oldbury scheme, 35
Open spaces, 82
Overcrowding, 3

P

Park belt, 17, 76
Parks, 82
Playing fields, 87
Preparation of a scheme, 38
Price of land, 102, 150
Public health, 122

Q

Quinton scheme, see Edgbaston, Harborne, and Quinton scheme

R

Railway companies, 44, 148
Railway sidings, 58
Rateable value, effect of limitation of houses, 111
Residential areas, 88, 91
Roads, 51, 56, 61
  Board, 64
  Cost of widening, 67
  Main, 62
  Owners', cheap construction of, 69
  Ring, 62, 64
  Secondary, 68
  Separate tramway tracks, 64
  Space for future widenings, 67
  To Wolverhampton, 36
Ruislip scheme, 59

S

Saltley, 25
Sheffield, cost of removing slums, 8
Sickness rate, 4
Slums, cost of removing, 8
Small Holdings, 88
Social considerations, 122
South Birmingham scheme, 34
Street widenings, cost of, 16
Sutton Coldfield scheme, 35

T

Traffic problem, Boston, 18
Tramways, separate tracks, 64

U

Ulm, 139

V

Vienna, 76

W

Water supply of Birmingham, 28
Widening roads, cost of, 67
Reservations in schemes, 67

Y

Yardley, 23, 24, 26, 27

PRINTED BY
WILLIAM BRENDON AND SON, LTD,
PLYMOUTH.

00080343

Digitized with financial assistance from the
Dr. Rani Karur
on 12 April, 2019